Appendix A.
Initial Study and Notice of Preparation

NOTICE OF PREPARATION OF
A DRAFT ENVIRONMENTAL IMPACT REPORT AND
NOTICE OF PUBLIC COMMENT PERIOD FOR A REMOVAL ACTION WORKPLAN

TO:	Agencies, Organizations and Interested Parties
PROJECT TITLE:	Sherman Oaks Center for Enriched Studies (SOCES) Comprehensive Modernization Project
SUBJECT:	Notice of Preparation of a Draft Environmental Impact Report in Compliance with Title 14, Section 15082(a), 15103, and 15375 of the California Code of Regulations and Notice of Public Comment Period for Removal Action Workplan

NOTICE IS HEREBY GIVEN that the Los Angeles Unified School District (LAUSD) is the Lead Agency under the California Environmental Quality Act (CEQA) in the preparation of the Environmental Impact Report (EIR) for the proposed Project identified below. The Lead Agency has prepared this Notice of Preparation (NOP) for the EIR, Preliminary Environmental Assessment-Equivalent (PEA-E) and Removal Action Workplan (RAW) to provide the widest exposure and opportunity for input from public agencies, stakeholders, organizations, and individuals on the scope of the environmental analysis addressing the potential effects of the proposed Project.

PROJECT LOCATION: The 21.5-acre SOCES campus is located at 18605 Erwin Street in the Community of Reseda, City of Los Angeles, CA 91335 (Assessor Parcel Number [APN] 2127-012-900) in the west San Fernando Valley. The school is on the southeast corner of Victory Boulevard and Yolanda Avenue. The Project site is not on any list of sites enumerated under Section 65962.5 of the Government Code (Cortese List).

PROJECT DESCRIPTION: The proposed Project encompasses most of the SOCES school campus and consists of the comprehensive modernization of the school, including demolition, construction, and renovation activities. The Project includes demolition of the gymnasium, lunch shelter, and four classroom buildings; removal of 12 classrooms in relocatable buildings; construction of two classroom buildings, gymnasium, and lunch shelter; remodel and modernization of the auditorium, administration and counseling buildings, and buildings D (Sanitary), E (Arts & Crafts), K (Classroom), and L (Classroom). Other improvements include upgrades to plumbing, electrical and storm drain systems, compliance with the American with Disabilities Act, landscape, hardscape, and exterior paint.

During construction of the new facilities, the District proposes to remove approximately 1,192 cubic yards of soil with elevated concentrations of arsenic and/or lead from the campus and dispose of it off-site in accordance with the conditions that are presented in the RAW.

POTENTIAL ENVIRONMENTAL EFFECTS: Pursuant to CEQA Guidelines Section 15060(d), and based on the environmental analysis in the Initial Study, the District has determined that an EIR is the appropriate level of environmental documentation for the Project. Environmental factors that will be analyzed in the EIR are: Cultural Resources (Historic).

The PEA-E and RAW present the findings of the environmental site investigations performed for this Project and outline the proposed process for the removal and off-site disposal of the impacted soil.

PUBLIC REVIEW PERIOD: LAUSD will make this NOP and the Initial Study (pursuant to California Code of Regulations, Title 14, Section 15082(b)) and RAW available for public review and comment from **November 3, 2017** to **December 3, 2017**.

RESPONSES AND COMMENTS: Please indicate a contact person for your agency or organization and send your comments to:
(*Please include "SOCES Comp Mod" in the subject line)*:

CEQA Questions and Comments
Los Angeles Unified School District
Office of Environmental Health and Safety
Attention: Linda Wilde, CEQA Project Manager
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017
Email: CEQA-comments@lausd.net

PEA-E and RAW Questions and Comments
Los Angeles Unified School District
Office of Environmental Health and Safety
Attention: Mr. Andrew Modugno, Site Assessment Project Manager
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017
Email: andrew.modugno@lausd.net

SCOPING MEETING: LAUSD will hold a scoping meeting on **Wednesday, November 8, 2017 at 6:30 PM** in Glenn Hall at SOCES, 18605 Erwin Street, Reseda, CA 91335. All agencies, organizations, and interested parties are encouraged to attend.

DOCUMENT AVAILABILITY: The Initial Study and RAW are available for public review during regular business hours at the locations listed below.

- LAUSD Office of Environmental Health and Safety, 333 South Beaudry Avenue, 21st Floor, Los Angeles, CA 90017
- SOCES School Library, 18605 Erwin Street, Reseda, CA 91335
- West Valley Regional Branch Library, 19036 Vanowen Street, Reseda, CA 91335
- Office of Environmental Health and Safety Website:
  - CEQA Initial Study http://achieve.lausd.net/CEQA
  - PEA-E and RAW http://achieve.lausd.net/siteassessment

AVISO DE PREPARACIÓN DE UN REPORTE DE IMPACTO AL MEDIO AMBIENTE Y AVISO DEL PERIODO DE COMENTARIO PÚBLICO PARA EL PLAN DE ACCIÓN DE REMOCIÓN

PARA:	Agencias, Organizaciones y Partidos Interesados
TÍTULO DEL PROYECTO:	Proyecto de Modernización Extensa de la Escuela Centro para Estudios Enriquecidos de Sherman Oaks (SOCES por sus siglas inglés)
SUJECTO:	Aviso de Preparación para un Reporte de Impacto al Medio Ambiente en cumplimiento con el Título 14, Sección 15082(a), 15103 y 15375 del Código de Reglamentos de California y Aviso De Comentario Público Para el Plan de Acción de Remoción

SE DA AVISO POR LA PRESENTE que el Distrito Escolar Unificado de Los Ángeles (LAUSD) es la Agencia Principal bajo la Ley de Calidad Ambiental de California (CEQA) en la preparación del Informe de Impacto Ambiental (EIR por sus siglas inglés) para el Proyecto propuesto que se identifica a continuación. La Agencia Principal ha preparado este Aviso de Preparación (NOP por sus siglas inglés) para el EIR, Evaluación Ambiental Preliminar-Equivalente (PEA-E por sus siglas inglés) y Plan de Acción de Remoción (RAW por sus siglas inglés) para proporcionar la más amplia exposición y oportunidad de aportes de agencias públicas, partes interesadas, organizaciones, e individuos en el alcance del análisis ambiental que aborda los efectos potenciales del Proyecto propuesto.

UBICACIÓN DEL PROYECTO: El campus de 21.5 acres de la Escuela Centro para Estudios Enriquecidos de Sherman Oaks se encuentra en 18605 Erwin Street en la comunidad de Reseda, Cuidad de Los Ángeles, California (Número de parcela del asesor [APN] 2127-012-900) en el oeste de San Fernando Valley. La escuela se encuentra en la esquina sureste de Victory Boulevard y Yolanda Avenue. El sitio del Proyecto no está en ninguna lista de sitios enumerados bajo la Sección 65962.5 del Código de Gobierno (Lista de Cortese).

DESCRIPCIÓN DEL PROYECTO: El Proyecto propuesto abarca la mayor parte del campus de la escuela SOCES y consiste de la modernización extensa de la escuela, incluyendo las actividades de demolición, construcción y renovación. El proyecto incluye la demolición del gimnasio, el pabellón de almuerzo y cuatro edificios de aulas; eliminación de 12 aulas en edificios reubicables; construcción de dos edificios de clase, gimnasio y el pabellón de almuerzo; remodelación y modernización del auditorio, edificios de administración y consejero, y edificios D (Sanitario), E (Artesanías), K (Aula) y L (Aula). Otras mejoras incluyen mejoras a los sistemas de plomería, electricidad y desagües pluviales, cumplimiento de la Ley sobre Estadounidenses con Discapacidades, paisajes, terrenos duros y pintura exterior. Durante la construcción de las nuevas instalaciones, el Distrito propone eliminar aproximadamente 1,192 yardas cúbicas de suelo con concentraciones elevadas de arsénico y / o plomo del campus y disponer de él fuera del sitio de acuerdo con las condiciones que se presentan en el PAR.

EFECTOS AMBIENTALES POSIBLES: De conformidad con la Sección 15060 (d) de las Directrices de CEQA, y en base al análisis ambiental del Estudio Inicial, el Distrito ha determinado que un EIR es el nivel apropiado de documentación ambiental para el Proyecto. Los factores ambientales que se analizarán en el EIR son: Recursos culturales (históricos).

El PEA-E y el RAW presentan los hallazgos de las investigaciones del sitio ambiental realizadas para este Proyecto y describen el proceso propuesto para la remoción y eliminación fuera del sitio del suelo impactado.

PERIODO DE REVISIÓN PÚBLICA: El Distrito hará que este NOP y el Estudio Inicial (de conformidad con el Código de Regulaciones de California, Título 14, Sección 15082[b]) y el RAW estén disponibles para revisión y comentarios públicos entre el 3 de noviembre de 2017 hasta el 3 de diciembre de 2017.

RESPUESTAS Y COMENTARIOS: Por favor indique una persona de contacto para su agencia u organización y envía sus comentarios a: *Por favor, incluye "SOCES Comp Mod" en la línea de asunto*

Preguntas y Comentarios sobre CEQA	Preguntas y Comentarios sobre el PEA-E o RAW
Los Angeles Unified School District	Los Angeles Unified School District
Office of Environmental Health and Safety	Office of Environmental Health and Safety
Attention: Linda Wilde, CEQA Project Manager	Attention: Mr. Andrew Modugno, Site Assessment Project Manager
333 South Beaudry Avenue, 21st Floor	333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017	Los Angeles, CA 90017
Email: CEQA-comments@lausd.net	Email: andrew.modugno@lausd.net

REUNIÓN INFORMATIVA: El LAUSD se reunirá sobre el alcance el miércoles 8 de noviembre de 2016 a las 6:30 PM en Glenn Hall en SOCES, 18605 Erwin Street, Reseda, CA 91335. Se anima a todas las agencias, organizaciones y partes interesadas a asistir.

DISPONIBILIDAD DEL DOCUMENTO: El estudio inicial y el RAW están disponibles para revisión pública durante el horario de atención habitual en los lugares que se detallan a continuación.

DISPONIBILIDAD DE DOCUMENTOS: El Estudio Inicial está disponible para revisión en las siguientes ubicaciones:

- LAUSD Office of Environmental Health and Safety, 333 South Beaudry Avenue, 21st Floor, Los Angeles, CA 90017
- SOCES School Library, 18605 Erwin Street, Reseda, CA 91335
- West Valley Regional Branch Library, 19036 Vanowen Street, Reseda, CA 91335
- Office of Environmental Health and Safety Website:
  - CEQA Initial Study http://achieve.lausd.net/CEQA
  - PEA-E and RAW http://achieve.lausd.net/siteassessment

October 2017 | **Initial Study**

SHERMAN OAKS CENTER FOR ENRICHED STUDIES COMPREHENSIVE MODERNIZATION

Prepared for:

Los Angeles Unified School District
Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor
Los Angeles, California 90017

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PLACEWORKS

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APPENDICES

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Abbreviations and Acronyms

AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing material
ACCM	asbestos-containing construction material
ADT	average daily trips
AQMP	air quality management plan
BMP	best management practices
BOE	Board of Education (LAUSD)
CalEEMod	California Emissions Estimator Model
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CCR	California Code of Regulations
C&D	construction and demolition
CDE	California Department of Education
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHPS	Collaborative for High Performance Schools
CMP	Los Angeles County Congestion Management Program
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
dBA Leq	equivalent continuous sound level, in decibels
DPM	diesel particulate matter
DSA	Division of the State Architect (under the California Department of General Services)
EIR	environmental impact report
EPA	US Environmental Protection Agency
FETU	Facilities Environmental Technical Unit
FTA	Federal Transit Administration
ESA	environmental site assessment
GHG	greenhouse gases
HRA	Health Risk Assessment
HVAC	heating, ventilation and air conditioning
IPCC	Intergovernmental Panel on Climate Change

Abbreviations and Acronyms

LADOT	Los Angeles Department of Transportation
LAFD	City of Los Angeles Fire Department
LAMC	Los Angeles Municipal Code
LARWQCB	Los Angeles regional water quality control board
LAUSD	Los Angeles Unified School District
LID	low-impact development
LST	localized significance thresholds
MBTA	Migratory Bird Treaty Act
MEP	Maximum Extent Practicable
Metro	Los Angeles County Metropolitan Transportation Authority
MPH	mile per hour
$MTCO_2e$	metric ton of CO_2e
MW	Materials and Waste Management
ND	negative declaration
NPDES	National Pollutant Discharge Elimination System
OEC	other environmental conditions
OEHHA	Office of Environmental Health Hazard Assessment
O_3	ozone
PDF	project design features
PEA	Preliminary Environmental Assessment
PF	Public Facility
PM	particulate matter
PRC	Public Resources Code
PPV	peak particle velocity
REC	recognized environmental condition
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	sustainable communities strategy
SO_2	sulfur dioxide
SoCAB	South Coast Air Basin
SOCES	Sherman Oaks Center for Enriched Studies

SS	Site
SRA	Source Receptor Area
SUP	School Upgrade Program
SUSMP	standard urban stormwater mitigation plan
SWPPP	stormwater pollution prevention plan
ULSD	ultra low sulfur diesel
VdB	vibration level
VOC	volatile organic compounds

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1. Introduction

1.1 OVERVIEW

The Los Angeles Unified School District (LAUSD or District) is proposing a comprehensive modernization of Sherman Oaks Center for Enriched Studies (SOCES project), 18605 Erwin Street in the Community of Reseda, City of Los Angeles, Los Angeles County, California.[1] Comprehensive Modernization Projects are designed to address the most critical physical needs of the building and grounds at the campus through building replacement, renovations, modernizations, and reconfiguration. The proposed SOCES project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA). This initial study provides an evaluation of the potential environmental consequences associated with this project.

1.2 BACKGROUND

On July 31, 2008, the LAUSD Board of Education (BOE) adopted a Resolution Ordering an Election and Establishing Specifications of the Election Order for the purpose of placing Measure Q, a $7 billion bond measure, on the November election ballot to fund the renovation, modernization, construction, and expansion of school facilities. On November 4, 2008, the bond passed. The nationwide economic downturn in 2009 resulted in a decline in assessed valuation of real property, which restricted the District's ability to issue Measure Q bonds and the remaining unissued Measures R and Y funds. Once assessed valuation improved, the BOE could authorize the issuance of bond funds.[2]

On December 10, 2013, the District refined their School Upgrade Program (SUP) to reflect the intent and objectives of Measure Q as well as the updated needs of District school facilities and educational goals.[3] Between July 2013 and November 2015, the SUP was analyzed under CEQA criteria in a program environmental impact report (EIR). On November 10, 2015, the BOE certified the Final SUP Program EIR.[4]

On March 10, 2015, the BOE approved pre-design and due diligence activities necessary to develop a project definition for a Comprehensive Modernization Project at SOCES. The Comprehensive Modernization Project at SOCES is intended to complete large-scale improvements to address the buildings and grounds in the greatest need of upgrades.[5]

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[1] SOCES. http://www.shermanoaksces.com/school-information/frequently-asked-questions/.

[2] LAUSD Board of Education Report. December 10, 2013. Report Number 143 – 13/14. Subject: School Upgrade Program.

[3] LAUSD Board of Education Report. December 10, 2013. Report Number 143 – 13/14. Subject: School Upgrade Program.

[4] LAUSD Regular Meeting Stamped Order Of Business. 333 South Beaudry Avenue, Board Room, 1 p.m., Tuesday, November 10, 2015 (Board of Education Report No. 159 – 15/16).

[5] LAUSD Board of Education Report. March 10, 2015. Report Number 373 – 14/15. Subject: Identification of 11 School Sites for the Development of Comprehensive Modernization Projects.

On December 8, 2015, the BOE approved the project definition for the SOCES proposed Project to provide facilities that are safe, secure, and better aligned with the current instructional program. The proposed Project is designed to address the most critical physical concerns of the building and grounds at the campus while providing renovations, modernizations, and reconfiguration as needed.[6]

1.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The environmental compliance process is governed by CEQA[7] and the State CEQA Guidelines.[8] CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of projects and to identify ways to avoid or reduce the environmental effects through feasible alternatives or mitigation measures. Compliance with CEQA applies to California government agencies at all levels: local, regional, and state agencies, boards, commissions, and special districts (such as school districts and water districts).

LAUSD is the lead agency for this proposed Project and is therefore required to conduct an environmental review to analyze the potential environmental effects associated with the proposed Project.

California Public Resources Code (PRC) Section 21080(a) states that analysis of a project's environmental impact is required for any "discretionary projects proposed to be carried out or approved by public agencies…." In this case, LAUSD has determined that an initial study is required to determine whether there is substantial evidence that construction and operation of the proposed Project would result in environmental impacts. An initial study is a preliminary environmental analysis to determine whether an EIR, a mitigated negative declaration (MND), or a negative declaration (ND) is required for a project.[9]

When an initial study identifies the potential for significant environmental impacts, the lead agency must prepare an EIR;[10] however, if all impacts are found to be less than significant or can be mitigated to less than significant, the lead agency can prepare an ND or MND that incorporates mitigation measures into the project.[11]

1.4 ENVIRONMENTAL PROCESS

A "project" means the whole of an action that has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and that is any of the following:

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[6] LAUSD Board of Education Report. December 8, 2015. Report Number 182-15/16. Subject: Amendment to the Facilities Services Division Strategic Execution Plan to Approve Project Definitions for Six Comprehensive Modernization Projects and Cancel Two Critical School Repair and Safety Projects.

[7] California Public Resources Code (PRC) Sections 21000 et seq.

[8] California Code of Regulations (CCR), Title 14, Sections 15000 et seq.

[9] 14 CCR Section 15063.

[10] 14 CCR Section 15064.

[11] 14 CCR Section 15070.

1) An activity directly undertaken by any public agency including but not limited to public works construction and related activities clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements thereof pursuant to Government Code Sections 65100-65700.
2) An activity undertaken by a person which is supported in whole or in part through public agency contacts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
3) An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies. (California Code of Regulations [CCR] § 15378[a])

The proposed actions by LAUSD constitute a "project" because the activity would result in a direct physical change in the environment and would be undertaken by a public agency. All "projects" in the State of California are required to undergo an environmental review to determine the environmental impacts associated with implementation of the project.

1.4.1 Initial Study

This Initial Study has been prepared in accordance with the CEQA and the CEQA Guidelines, as amended, to determine if the project could have a significant impact on the environment. The purposes of this Initial Study, as described in the State CEQA Guidelines Section 15063, are to 1) provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or ND; 2) enable the lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration; 3) assist the preparation of an EIR, if one is required; 4) facilitate environmental assessment early in the design of a project; 5) provide documentation of the factual basis for the finding in an ND that a project will not have a significant effect on the environment; 6) eliminate unnecessary EIRs; and 7) determine whether a previously prepared EIR could be used with the project. The findings in this Initial Study have determined that an EIR is the appropriate level of environmental documentation for this Project.

1.4.2 Environmental Impact Report

The EIR will include information necessary for agencies to meet statutory responsibilities related to the proposed Project. State and local agencies will use the EIR when considering any permit or other approvals necessary to implement the project. A preliminary list of the environmental topics that have been identified for study in the EIR is provided in the Initial Study Checklist (Chapter 4).

Following consideration of any public comments on the Initial Study, the Draft EIR will be completed and then circulated to the public and affected agencies for review and comment. One of the primary objectives of CEQA is to enhance public participation in the planning process; public involvement is an essential feature of CEQA. Community members are encouraged to participate in the environmental review process, request to be notified, monitor newspapers for formal announcements, and submit substantive comments at every possible opportunity afforded by the District. The environmental review process provides several opportunities for the public to participate through public notice and public review of CEQA documents and public meetings. Additionally, LAUSD is required to consider comments from the scoping process in the preparation of the Draft EIR and to respond to Draft EIR public comments in the Final EIR.

1.4.3 Tiering

The SOCES Comprehensive Modernization project is one of many types of projects that were analyzed in the School Upgrade Program (SUP) EIR, certified by the LAUSD BOE on November 10, 2015. LAUSD's SUP EIR meets the criteria of a Program EIR under CEQA Guidelines Section 15168 (a)(4) as one "prepared on a series of actions that can be characterized as one large project and are related…[a]s individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways."

The certified Program EIR enables LAUSD to streamline future environmental compliance and reduce the need for repetitive environmental studies. It serves as the framework and baseline for CEQA analyses of later projects through a process known as "tiering." Under CEQA Guidelines Sections 15152(a) and 15385, "tiering" refers to using the analysis of general matters from a broad EIR (such as one prepared for a program) and applying it to later EIRs and NDs on narrower projects, incorporating by reference the general discussion from the broad EIR and concentrating the later EIR or ND solely on the issues specific to that project.

The Program EIR is applicable to all projects implemented under the SUP. The SUP Program EIR grouped potential projects into four categories based on project scope, type of construction, and location of projects. This project falls under the categories of Type 2, "New Construction on Existing Campus,"12 and Type 3, "Modernization, Repair, Replacement, Upgrade, Remodel, Renovation and Installation."

The Project is considered a site-specific project under the SUP and was analyzed, along with several other projects, in the Program EIR; therefore, the EIR will be tiered from the 2015 SUP Program EIR. The Program EIR is available for review online at http://achieve.lausd.net/ceqa and at LAUSD's Office of Environmental Health and Safety, 333 South Beaudry Avenue, 21st Floor, Los Angeles, CA 90017.

1.4.4 Project Plan and Building Design

The Project is subject to California Department of Education CDE criteria and the school architectural designs are subject to review and approval by the California Division of the State Architect (DSA). The proposed SOCES Comprehensive Modernization Project, along with all other SUP-related projects, is required to comply with specific design standards and sustainable building practices. Certain standards assist

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[12] Type 2: Demolition and new building construction on existing campus (replace school building on same location); Installation of temporary structures. Type 3: Outdoor repair, modernization, replacement or upgrade of athletic fields, play equipment, fencing, parking, replace shade shelter, asphalt/concrete paths, driveways, ADA compliance, seismic retrofits; Repair and replacement of building systems such as flooring, windows, and roofing; Interior and exterior installation, repair, replacement and maintenance.

in reducing environmental impacts, such as the California Green Building Code (CALGreen),[13] LAUSD Standard Conditions of Approval, and the Collaborative for High Performance Schools (CHPS) criteria.[14]

Collaborative for High Performance Schools. The proposed Project would include CHPS criteria points under seven categories: Integration, Indoor Environmental Quality, Energy, Water, Site (SS), Materials and Waste Management, and Operations and Metrics. Under the current 2014 CA-CHPS criteria, the Project would earn at least 250 points—110 prerequisite criteria points and 140 criteria credit points. The optional credit points would be determined during later site and architectural design phases, but all prerequisites are required.

Project Design Features. Project design features (PDFs) are environmental protection features that modify a physical element of a site-specific project and are depicted in a site plan or documented in the project design plans. PDFs may be incorporated into a project design or description to offset or avoid a potential environmental impact and do not require more than adhering to a site plan or project design. Unlike mitigation measures, PDFs are not special actions that need to be specifically defined or analyzed for effectiveness in reducing potential impacts.

Standard Conditions of Approval. LAUSD Standard Conditions of Approval are uniformly applied development standards and were adopted by the LAUSD BOE in November 2015.[15] The Standard Conditions of Approval were compiled from established LAUSD standards, guidelines, specifications, practices, plans, policies, and programs, as well as typically applied mitigation measures. The conditions are divided into the 18 LAUSD CEQA environmental topics (Appendix G of the CEQA Guidelines plus Pedestrian Safety).[16] For each Standard Condition of Approval, compliance is triggered by factors such as the project type, existing conditions, and type of environmental impact. Compliance with every condition is not required.

Mitigation Measures. If, after incorporation and implementation of federal, state, and local regulations; CHPS prerequisite criteria; Project Design Features; and Standard Conditions of Approval, there are still significant environmental impacts, then feasible and project-specific mitigation measures are required to reduce impacts to less than significant levels. Mitigation under CEQA Guidelines Section 15370 includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

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[13] California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations.

[14] The Board of Education's October 2003 Resolution on Sustainability and Design of High Performance Schools, directs staff to continue its efforts to ensure that every new school and modernization project in the District, from the beginning of the design process, incorporate CHPS (Collaborative for High Performance Schools) criteria to the extent possible.

[15] LAUSD. 2015. Program EIR for the School Upgrade Program. Available at: http://achieve.lausd.net/ceqa. (see Table 4-1 and Appendix F of the Program EIR).

[16] As of September 2016, an additional environmental topic has since been required by the State Office of Planning and Research (Tribal Cultural Resources). The LAUSD Environmental Checklist now has 19 topics.

- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures must further reduce significant environmental impacts above and beyond compliance with federal, state, and local laws and regulations; Project Design Features; CHPS and LAUSD Standard Conditions of Approval.

The specific LAUSD Standard Conditions of Approval are identified in the tables under each CEQA topic.[17] Federal, state, regional, and local laws, regulations, plans, and guidelines; CHPS criteria; Project Design Features; and LAUSD conditions are considered part of the project and are included in the environmental analysis.

1.5 IMPACT TERMINOLOGY

The following terminology is used to describe the level of significance of impacts.

- A finding of **no impact** is appropriate if the analysis concludes that the project would not affect the particular topic area in any way.
- An impact is considered **less than significant** if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered **less than significant with mitigation incorporated** if the analysis concludes that the project may have a substantial adverse effect on the environment; however, with the inclusion of environmental commitments or other enforceable measures, those adverse effects would be reduced or avoided and the project would ultimately result in no substantial adverse change to the environment.
- An impact is considered **potentially significant** if the analysis concludes that it could have a substantial adverse effect on the environment. If any impact is identified as potentially significant, additional analysis and preparation of an EIR is required. The EIR need only include those potentially significant impacts identified in the Initial Study.

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[17] Collaborative for High Performance Schools (CHPS) criteria are summarized. The full list of criteria can be found at http://www.chps.net/dev/Drupal/California.

1.6 ORGANIZATION OF THE INITIAL STUDY

The content and format of this report are designed to meet the requirements of CEQA and the State CEQA Guidelines. The finding of this Initial Study is that the Proposed Project may have significant environmental impacts. This report contains the following sections:

Chapter 1, ***Introduction,*** identifies the purpose and scope of the Initial Study and the terminology used, and organization of the report.

Chapter 2, ***Environmental Setting,*** describes the existing conditions, surrounding land uses, general plan designations, and existing zoning at the school and surrounding area.

Chapter 3, ***Project Description,*** identifies the location and describes the Proposed Project in detail.

Chapter 4, ***Environmental Checklist and Analysis,*** presents the LAUSD CEQA checklist, an analysis of environmental impacts, and the impact significance finding for each resource topic. This section identifies the CHPS criteria, PDFs, and Standard Conditions of Approval as applicable. Bibliographical references and individuals cited for information sources and technical data are footnoted throughout this CEQA Initial Study; therefore a stand-alone bibliography section is not required.

Chapter 5, ***List of Preparers,*** identifies the individuals who prepared this Initial Study and technical studies.

Appendices have data supporting the analysis or contents of this CEQA Initial Study.

A. Air Quality and Greenhouse Gas Emissions Background and Modeling Data

B. Protected Tree Report

C. Geologic Evaluation

D. Phase I Environmental Site Assessment

E. Noise and Vibration Background and Modeling Data

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2. Environmental Setting

2.1 PROJECT LOCATION

The 21.5-acre SOCES campus is located at 18605 Erwin Street in the Community of Reseda, City of Los Angeles, 91335 (Assessor Parcel Number [APN] 2127-012-900), in the West San Fernando Valley. The school is on the southeast corner of Victory Boulevard and Yolanda Avenue. Regional access to the site is from the Ventura Freeway (U.S. Route 101) to Reseda Boulevard (see Figure 1, *Regional Location*).

2.2 SURROUNDING LAND USE

The SOCES campus is in an urbanized area surrounded by residential and commercial uses. The school is bordered on the north by Victory Boulevard and single-family residential (see Figure 2, *Local Vicinity*). Multi-family residential (apartments) and a small strip commercial center are located at the northwest corner of Victory Boulevard and Reseda Boulevard. To the south is Erwin Street and single- and multi-family residential (apartments). To the east is an alleyway and multi-family residential (apartments), a nursery school, and a McDonald's fast-food restaurant (see Figure 3, *Surrounding Land Use*). Reseda Boulevard, apartments, and a small used-car dealership are further east. To the west is Yolanda Avenue and single-family residential. The concrete-lined Los Angeles River flood control channel is approximately 0.25 mile north of the school. The Ventura Freeway is approximately 0.75 mile south of the school, and the Orange Line Bike Path (Class I off-street) is 0.25 mile south.[18]

2.3 CAMPUS HISTORY

The SOCES campus is located at 18605 Erwin Street, Los Angeles, Los Angeles County, California. The property was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a large field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was in the northwestern corner of the campus (Building 32, currently a transportation office). Four more single-family dwellings were in the southern portion of the school property during this period. These four southern dwellings were removed between 1953 and 1954. All of the school buildings, with the exception of the portable classrooms, and pre-existing northwestern building, were constructed in 1954. A fire broke out in 1954 that destroyed Classroom Building N, one of the original buildings. Classroom Building N was rebuilt in 1956.[19]

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[18] The Orange Line Bike Path is an 18-mile rail-trail paralleling the Los Angeles Metro's Orange Line rapid busway in the northern neighborhoods of Los Angeles. Both the busway and the trail stretch from North Hollywood to Chatsworth along the former Southern Pacific Railroad Burbank Branch right-of-way. https://www.traillink.com/trail/orange-line-bike-path.aspx.

[19] Sapphos Environmental, Inc. March 6, 2017. Historic Resource Evaluation Report for Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, California 91355.

The school originally opened in 1955 as South Reseda Junior High, and in 1956 the name was changed to Sequoia Junior High School. SOCES magnet school began operating on a portion of the school campus in 1980. Over a two-year period, between 1983 and 1985, the students attending Sequoia Junior High School were transitioned into other District schools, and the entire campus eventually operated as the SOCES magnet school. SOCES campus property was determined to be eligible for listing in the California Register of Historical Resources.[20] See Section V, *Cultural Resources*, of this Initial Study for further discussion.

2.4 EXISTING CONDITIONS

The 21.5-acre SOCES magnet school campus is a largely intact example of a 1950s California school complex; it has 2,100 students in grades 4 to 12. The school has one-story buildings, including classroom, gymnasium, auditorium, administration, library, and multipurpose buildings; a lunch shelter and other small buildings; and a central quad area with stage, all in the southern half of the property. The rear of the property (northern half) is improved with an athletic field, paved playground, and tennis courts. Figures 4a and 4b, *Site Photographs*, show some of the existing campus.

The school campus elevation is between 735 and 740 feet above mean sea level. The school and vicinity slope very gently to the north-northwest.[21] The main entrance is on Erwin Street, which has a deep, 70-foot turf setback from the Erwin Street.

2.4.1 Existing Facilities

The layout of the school is known as "campus type," where all buildings are one-story and open to outdoor hallways, and is a combination of both the cluster plan and finger plan types. All buildings on the campus were covered with stucco, except for the auditorium and gymnasium, which are constructed of steel and concrete. In the middle of the campus is a central common area in the form of a quarter circle (center circle and student quad). Many of the one-story classroom buildings radiate from this space to the southeast (finger plan). The buildings each have exterior covered walkways and are separated from each other by long narrow courtyards. Other buildings are clustered in the southwest quadrant of the campus (cluster plan). Table 1 and Figure 5, *Existing Campus,* show existing campus facilities.

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[20] Sapphos Environmental, Inc. March 6, 2017. Historic Resource Evaluation Report for Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, California 91355

[21] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

Table 1 Existing Facilities

Bldg. No.	Building	Classrooms	Total Square Footage
1	Auditorium		15,365
2	Cafeteria		8,365
3	Student Store		962
4	Choral Music		3,150
5	Instrumental Music		2,156
6	Industrial Arts #1		6,908
7	Industrial Arts #2		6,046
8	Building A (Classroom)	4	4,973
9	Building B (Classroom)	4	5,416
10	Building C (Classroom)	3	3,258
11	Library Building		5,852
12	Counseling Building		4,874
13	Administration Building		3,228
14	Building D (Sanitary)		2,789
15	Building E (Arts & Crafts)	4	6,009
16	Building F (Classroom)	4	5,953
17	Building G (Homemaking)	3	4,860
18	Building H (Classroom)	3	2,507
19	Building J (Classroom)	3	4,764
20	Building K (Classroom)	4	6,615
21	Building L (Classroom)	4	5,515
22	Building M (Classroom)	3	3,008
23	Building N (Classroom)	3	3,979
24	Gymnasium Building		24,076
25	Lath House		1,344
26	Agriculture Building	1	1,504
27	Utility Building		2,195
28	Gardener's Tool Shed		104
29	Storage Unit		360
30	Relocatable Building Aa-2742 (Classrooms & Storage)	2	1,833
31	Relocatable Building Aa-1508 (Classrooms & Storage)	2	1,728
32	Transportation Building K112	0	1,988
33	Relocatable Building Aa-2198 (Classrooms)	2	1,792
34	Relocatable Building Aa-2197 (Classrooms)	2	1,792
35	Modular Building X3947 (Classrooms)	2	1,900
36	Modular Building X2220 (Computer Lab)	1	950
37	Modular Building X2207 (Classroom)	1	950
	Lunch Shelter / Food Services		3,567
	Outdoor Spaces		90,600
	Campus Total (does not include outdoor space)	**55**	**162,635**

Note: All numbers are based on LAUSD Sherman Oaks Center for Enriched Studied Comprehensive Modernization Project – Space Program. October 28, 2016.

2.4.2 Site Access and Circulation

The main entrance to the campus is along Erwin Street. Student drop-off and pick-up takes place along two streets: Erwin Street and Yolanda Avenue. The main drop-off and pick-up from vehicles is on the north side of Erwin Street. 'No Stopping' and 'Passenger Loading' signs limit the location and amount of time cars are allowed to park along the curb. Student drop-off and pick-up from buses only takes place along the off-street (on-campus) loading and unloading zone on Yolanda Avenue; this zone is parallel to the street on the school campus. No stopping or parking is allowed along Yolanda Avenue on school days. There is no parking or stopping along the south side of Victory Boulevard along the north school frontage.

2.4.3 Parking

The school has three on-campus parking lots: 72 spaces in Student and Staff Parking Lot #3 the northwest campus with access from Yolanda Street; 40 spaces in Staff Parking Lot #2 in the southeast corner of the school, with two access driveways from Erwin Street; and 12 spaces in Staff Parking Lot #1 on the south side of the school adjacent to Building H, with access from Erwin Street. Guest parking is available along the surrounding streets.

2.4.4 Operation

Traditional School. Sherman Oaks Center for Enriched Studies Magnet is a two-semester, single-track span school that serves 4th through 12th grades. Students attend classes from August through June. School hours are generally 8:00 AM to 3:20 PM.

School-Related Events. The school has after-school programs for the students, such as special-interest clubs, and extracurricular activities that end later than 3:20 PM. There are also occasional nighttime and weekend events during the school year. Some of these events are campus-wide, such as school plays and open houses, while others are grade specific, such as commencement.

Community Use. In compliance with the Civic Center Act, the campus is currently available for community use at selected times when not in use by LAUSD.[22]

2.5 GENERAL PLAN AND EXISTING ZONING

The zoning designation for the school property is [Q]PF-1XL-RIO.[23] PF (Public Facilities) is the designation for the use and development of publicly owned land, including public elementary and secondary schools. [Q] means additional restrictions on building design, landscape buffer, signs, etc.; '1' is Height District No. 1; and

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[22] CA Education Code Sections 38130–38139.

[23] City of Los Angeles, Department of City Planning. Parcel Profile Report for 18605 Erwin Street in Reseda (APN 2127-012-900). zimas.lacity.org, planning.lacity.org.

'XL' is Extra Limited Height District where no building or structure shall exceed two stories, nor shall the highest point of the roof of any building or structure exceed 30 feet in height.[24]

'RIO' designates that the property is within the River Improvement Overlay District that was established for areas around the Los Angeles River.[25] The purpose of a River Improvement Overlay District is to:

1) Support the goals of the Los Angeles River Revitalization Master Plan;
2) Contribute to the environmental and ecological health of the City's watersheds;
3) Establish a positive interface between river adjacent property and river parks and/or greenways;
4) Promote pedestrian, bicycle and other multi-modal connection between the river and its surrounding neighborhoods;
5) Provide native habitat and support for local species;
6) Provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area;
7) Provide safe, convenient access to and circulation along the river;
8) Promote the river identity of river adjacent communities; and
9) Support the Low Impact Development (LID) Ordinance, the City's Irrigation Guidelines, and the Standard Urban Stormwater Maintenance Program.

The General Plan Land Use designation is Public Facilities.[26] The school campus is also within the Reseda-West Van Nuys Community Plan Area and the Tarzana Neighborhood Council District.[27]

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[24] City of Los Angeles Municipal Code, Section 12.21.1. Height of Building or Structures. http://library.amlegal.com/nxt/gateway.dll/California/lapz/municipalcodechapteriplanningandzoningco/chapterigeneralprovisionsandzoning/article2specificplanning-zoningcomprehen/sec12176m1limitedindustrialzone?f=templates$fn=default.htm$3.0$vid=amlegal:lapz_ca$anc.

[25] Zoning Information (Z.I) No. 2358 River Improvement Overlay District. Ordinance Nos. 183144 and 183145. Effective August 20, 2014. Revised January 12, 2015. http://zimas.lacity.org/documents/zoneinfo/ZI2358.pdf.

[26] Reseda-West Van Nuys Community Plan Area. http://planning.lacity.org/complan/valley/respage.htm

[27] City of Los Angeles, Department of City Planning. Parcel Profile Report for 18605 Erwin Street in Reseda (APN 2127-012-900). zimas.lacity.org | planning.lacity.org.

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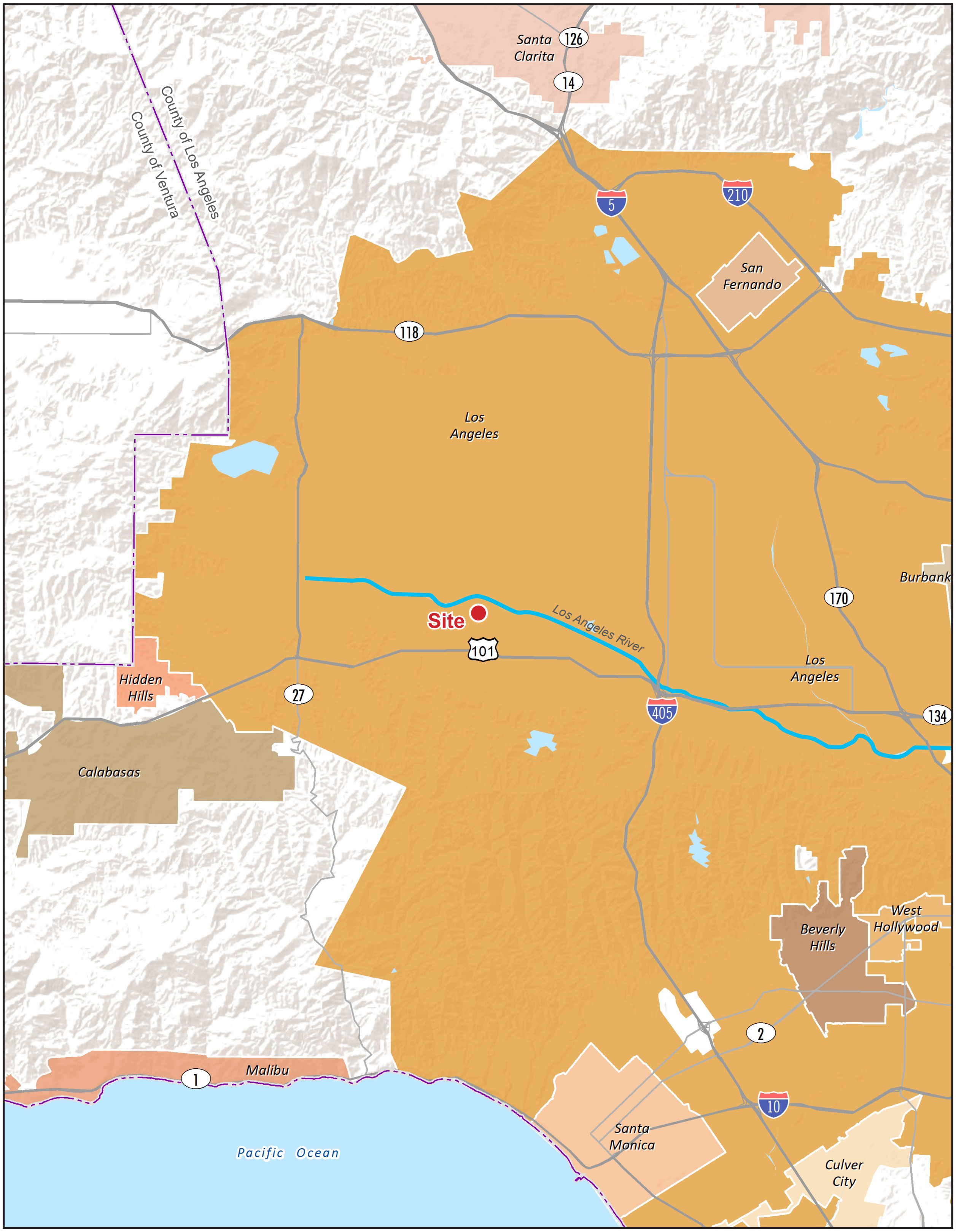
Figure 1 - Regional Location



Note: Unincorporated county areas are shown in white.

0 3
Scale (Miles)

Base Map Source: ESRI, 2017

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Figure 2 - Local Vicinity

Base Map Source: ESRI, 2017

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Figure 3 - Surrounding Land Use

Base Map Source: Google Earth Pro, 2017

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Figure 4a - Site Photographs

Photo 1. View looking Northeast toward front school entrance and main office.

Photo 2. View looking North toward courtyard between the Library and Administration Buildings.

Photo Source: PCR, 2015

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Photo 3. View looking East toward Central Courtyard and Classroom Buildings in Southeast Portion of Campus.

Photo 4. View looking Northeast toward Bauer Auditorium, Primary Elevation.

Photo Source: PCR, 2015

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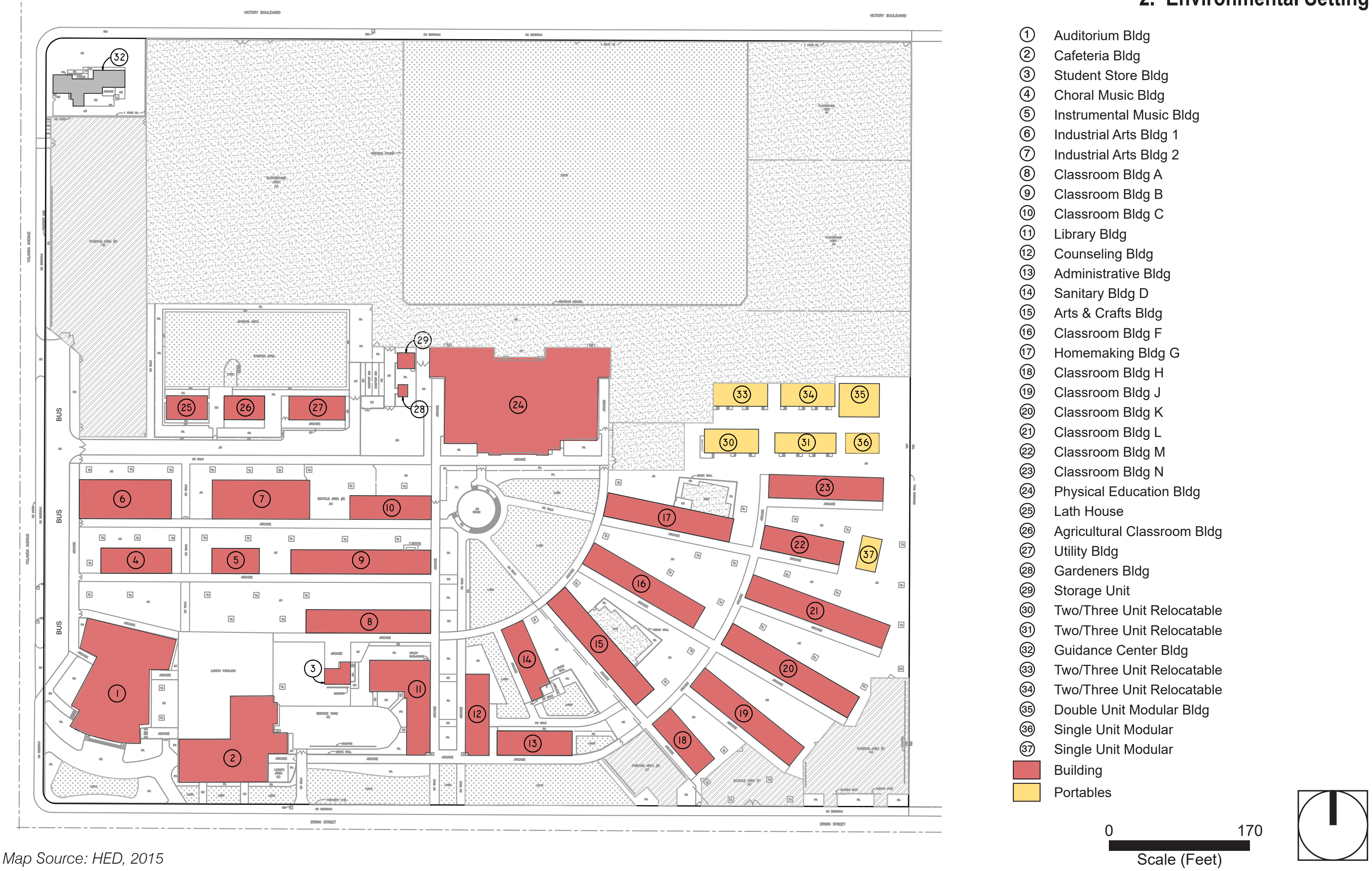
Figure 5 - Existing Campus



①	Auditorium Bldg
②	Cafeteria Bldg
③	Student Store Bldg
④	Choral Music Bldg
⑤	Instrumental Music Bldg
⑥	Industrial Arts Bldg 1
⑦	Industrial Arts Bldg 2
⑧	Classroom Bldg A
⑨	Classroom Bldg B
⑩	Classroom Bldg C
⑪	Library Bldg
⑫	Counseling Bldg
⑬	Administrative Bldg
⑭	Sanitary Bldg D
⑮	Arts & Crafts Bldg
⑯	Classroom Bldg F
⑰	Homemaking Bldg G
⑱	Classroom Bldg H
⑲	Classroom Bldg J
⑳	Classroom Bldg K
㉑	Classroom Bldg L
㉒	Classroom Bldg M
㉓	Classroom Bldg N
㉔	Physical Education Bldg
㉕	Lath House
㉖	Agricultural Classroom Bldg
㉗	Utility Bldg
㉘	Gardeners Bldg
㉙	Storage Unit
㉚	Two/Three Unit Relocatable
㉛	Two/Three Unit Relocatable
㉜	Guidance Center Bldg
㉝	Two/Three Unit Relocatable
㉞	Two/Three Unit Relocatable
㉟	Double Unit Modular Bldg
㊱	Single Unit Modular
㊲	Single Unit Modular
🟥	Building
🟨	Portables

Base Map Source: HED, 2015

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3. Project Description

3.1 PROPOSED PROJECT

The proposed Project encompasses most of the SOCES school campus and consists of the comprehensive modernization of its facilities. The 21.5-acre SOCES campus at 18605 Erwin Street is a 4th through 12th grade magnet school (see Figure 6, *Conceptual Site Plan*).

The proposed Project includes replacing the existing portable classrooms with a new two-story elementary school, creating two offset wings on the southern edge of the playground; rebuilding of the gymnasium complex in a new location on the northwest corner of the campus; replacement of aging classrooms on the west campus with a new two-story science and technology building and replacement of the lunch shelter.

3.1.1 Campus Improvements

Specifically, the proposed Project would include the following changes to the campus, as shown in Table 2 and Figure 7, *Campus Improvements*.

- **Demolition and Removal**
  - Gymnasium Building (Building #24)
  - Lunch Shelter
  - 12 classrooms in 7 relocatable buildings (#30, 31, 33–37)
  - Instrumental Music Building (Building #5)
  - Industrial Arts Building #2 (Building #7)
  - Building B (Classroom) (Building #9)
  - Building C (Classroom) (Building #10)

- **New Construction**
  - Classroom Building (grades 7–12)
  - Elementary Classroom Building (grades 4–6)
  - Gymnasium
  - Lunch Shelter

- **Remodel**
  - Auditorium Building (Building #1). The building will be seismically retrofitted and modernized.
  - Administration Building (Building #13). The central administration area will be reconfigured to create a secure entryway.
  - Counseling Building (Building #12). The central administration area will be reconfigured to create a secure entryway.

  - Building D (Sanitary) (Building #14). ADA upgrades and new finishes
  - Building K (Classroom) (Building #20). Minor reconfiguration – Removal of existing cabinetry
  - Building L (Classroom) (Building #21). ADA upgrades and new finishes

- **Site Upgrades**
  - Site-wide infrastructure, including domestic water; irrigation; gas; sewer; fire, telephone, and data systems; electrical; storm drainage
  - Sitewide upgrades to comply with Americans with Disabilities Act (ADA)
  - Landscape, hardscape, and exterior paint

Table 2 Proposed Project (Demolition, Remodel, and Construction)

Bldg. No.	Building	Class-rooms	Demolition	Remodel	New Construction	Existing to Remain	Total
1	Auditorium			15,365			15,365
2	Cafeteria					8,365	8,365
3	Student Store					962	962
4	Choral Music					3,150	3,150
5	Instrumental Music		2,156				
6	Industrial Arts #1					6,908	6,908
7	Industrial Arts #2		6,046				
8	Building A (Classroom)	4				4,973	4,973
9	Building B (Classroom)	4	5,416				
10	Building C (Classroom)	3	3,258				
11	Library Building					5,852	5,852
12	Counseling Building			4,874			4,874
13	Administration Building			3,138	90		3,228
14	Building D (Sanitary)			700		2,089	2,789
15	Building E (Arts & Crafts)			0		6009	6,009
16	Building F (Classroom)	4				5,953	5,953
17	Building G (Homemaking)	3				4,860	4,860
18	Building H (Classroom)	3				2,507	2,507
19	Building J (Classroom)	3				4,764	4,764
20	Building K (Classroom)	4		4,249		2,366	6,615
21	Building L (Classroom)	4		931		4,584	5,515
22	Building M (Classroom)	3				3,008	3,008
23	Building N (Classroom)	3				3,979	3,979
24	Gymnasium Building		24,076				
25	Lath House					1,344	1,344
26	Agriculture Building	1				1,504	1,504
27	Utility Building					2,195	2,195
28	Gardener's Tool Shed					104	104
29	Storage Unit					360	360
30	Relocatable Building Aa-2742 (Classrooms & Storage)	2	1,833				
31	Relocatable Building Aa-1508 (Classrooms & Storage)	2	1,728				
32	Transportation Building K112	0				1,988	1,988

Table 2 Proposed Project (Demolition, Remodel, and Construction)

Bldg. No.	Building	Class-rooms	Demolition	Remodel	New Construction	Existing to Remain	Total
33	Relocatable Building Aa-2198 (Classrooms)	2	1,792				
34	Relocatable Building Aa-2197 (Classrooms)	2	1,792				
35	Modular Building X3947 (Classrooms)	2	1,900				
36	Modular Building X2220 (Computer Lab)	1	950				
37	Modular Building X2207 (Classroom)	1	950				
	Lunch Shelter / Food Services		3,567				
	Two 2-Story Classroom Buildings (grades 7–12)	15			40,503		40,503
	2-Story Elementary Classroom Building (grades 4–6)	13			19,903		19,903
	Gymnasium				40,573		40,573
	Lunch Shelter / Food Services				3,567		3,567
	Outdoor Spaces			90,600			90,600
	Campus Total* (does not include outdoor space)	**62****	**50,105** (23 classrooms)	**30,181** (4 classrooms)	**104,545** (28 classrooms)	**76,936** (35 classrooms)	**211,663**

Note: All numbers are in square feet (except classrooms). All new square footages are approximate and subject to change during final site and architectural planning and design phases. These square footage changes would not significantly change the environmental analysis or findings in this Initial Study.

* Square footage totals may not add up exactly due to rounding and the way usable space is calculated. All numbers are based on LAUSD Sherman Oaks Center for Enriched Studied Comprehensive Modernization Project – Space Program. October 28, 2016.

** Although the project would increase classrooms by 7, it would not change the existing 2,100-seat capacity of the school.

The architectural style of the new buildings would have elements of "Mid-century Modern style" that would be compatible with yet differentiated from the original architecture of the campus (see Figure 8, *Conceptual Illustration – Aerial View;* Figure 9, *Conceptual Illustration – Central Plaza;* Figure 10, *Conceptual Illustration – Elementary Building*). These illustrations show scale and mass; they do not have the architectural details that would be included in the design of the buildings to create a cohesive campus and to complement the existing architecture. Security lighting would be provided using lighting fixtures that are designed to reduce glare, light trespass, and sky glow. Utilities located at ground level and on the roof would be screened with landscaping, fencing, and/or walls, as appropriate and depending on location. Parking Lot 3 would receive an asphalt overlay and be restriped.

The proposed Project would not change the current capacity of the school or affect student enrollment. No changes to traditional school operations, school-related events, or community use would occur as the result of this Project. At project completion, campus access and traffic circulation, drop-off and pick-up locations would remain the same as the existing campus.

3.2 CONSTRUCTION PHASE

Excavation and Off-Site Disposal

During construction of the new facilities, the District proposes to remove approximately 1,192 cubic yards of soil with elevated concentrations of arsenic and/or lead from the campus and dispose of it off-site in accordance with the conditions that are presented in the Removal Action Workplan (RAW). Soil containing the chemicals of concern (COCs) at levels that exceed the District's thresholds would be removed from areas located throughout the construction area.

The excavation would be performed using heavy equipment consisting of, but not limited to, an excavator, backhoe, loader, dump truck, and wastewater holding tanks. Excavation operations may generate fugitive dust emissions. Suppressant foam, water spray, and other forms of vapor and dust control may be required during excavation, and workers may be required to use personal protective equipment to reduce exposure to the COCs.

The depth of excavations may be limited due to physical constraints on the site. Confirmation soil sampling and analysis would be conducted to verify soil impact concentrations at the excavation bottom and sidewalls.

Excavated soil would be either directly-loaded into waiting dump trucks or temporarily stockpiled within an on-site "holding area" using a rubber-tire backhoe or similar equipment (such as wheel loader). Any temporary soil stockpiles would be properly secured and protected until ready for loading for off-site transportation and disposal to an appropriate facility.

Clean, imported soil and/or other fill material would be brought to the site to backfill areas where impacted soil was removed. Imported soil and/or other fill material would be accompanied by certificates, analytical data, and/or other supporting documents that indicate the import material is in conformance with cleanup criteria. Construction contractors are required to comply with LAUSD standard specifications for proper packaging, transportation, and disposal of any discovered hazardous materials before building construction starts. Specifically, construction contractors are required comply with worker training, health and safety, hazardous material containment, and off-site transport and disposal of contaminated soil as detailed in the plans and procedures included in the Removal Action Workplan.

Construction Schedule

Pre-construction and design activities began in the fourth quarter of 2015 (Q4-2015) and are anticipated to be completed in Q2-2018 (including DSA review). Construction activities are anticipated to begin in Q3-2018 and completed in Q2-2022. Any soil that is imported or exported must be chemically tested in accordance with specific written procedures as outlined in LAUSD Specifications, Section 01 4524, *Environmental Import/Export Materials Testing.*[28] This section specifies the requirements for the sampling, testing, transportation, and certification of imported fill materials or exported fill materials from school sites. Onsite

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[28] LAUSD Asset Management, Guide Specifications: Division 01 General Requirements, Section 01 4524, Environmental Import/Export Materials Testing. October 1, 2011.

concrete and asphalt crushing would not occur on campus. Non-hazardous debris and soil would be exported to appropriate facilities.

The entire demolition, construction, and modernization activities are expected to take approximately 36 months (two 18-month sequential phases). Because of active school operation, less than five acres (contiguous) in each location on campus would be disturbed at any one time. Anticipated construction schedule and equipment are shown in Table 3.

Table 3 Construction Schedule and Equipment

Phase 1 & 2	Schedule*	Equipment	Maximum Number per Day
Demolition; Interim Student Housing; Modernization** (i.e., Building Interiors)	2 months	Excavators w/breaker	1
		Loader	1
		Bobcat/Skip	1
		Crushing Equipment	1
		Water Truck	1
		Building Debris haul trips; average 10 CY end-dump trucks	10
		Asphalt/Concrete Debris haul trips; average 10 CY end-dump trucks	10
		Jack Hammers/Air Compressor	2
Site Preparation & Modernization**	2 months	Excavator	1
		Compactor	1
		Loader	1
		Skip Loader	1
		Water Truck	1
		Soil haul trips (soil export); average 14 CY bottom dump trucks	35
		Vibratory Rollers (for 95% soil compaction)	2
		Trencher / Excavator	1
Building Construction & Modernization**	12 Months	Concrete Trucks	5
		Concrete Pump	1
		Crane	1
		Dump Trucks	2
		Fork Lifts/Gradalls	4
		Delivery Trucks	12
		Backhoes	2
		Air Compressor	1
Asphalt Paving; Off-Campus Street Work	2 months	Skip Loaders	2
		Roller	1
		Paver	1
		Asphalt Trucks	8
		Water Truck	1

* Approximate dates provide the most conservative schedule. These dates are subject to change at LAUSD's discretion or as a result of unforeseen circumstances.
** Interior upgrades would be completed over summer recess and when students are not on campus.

3.2.1 Construction Phasing

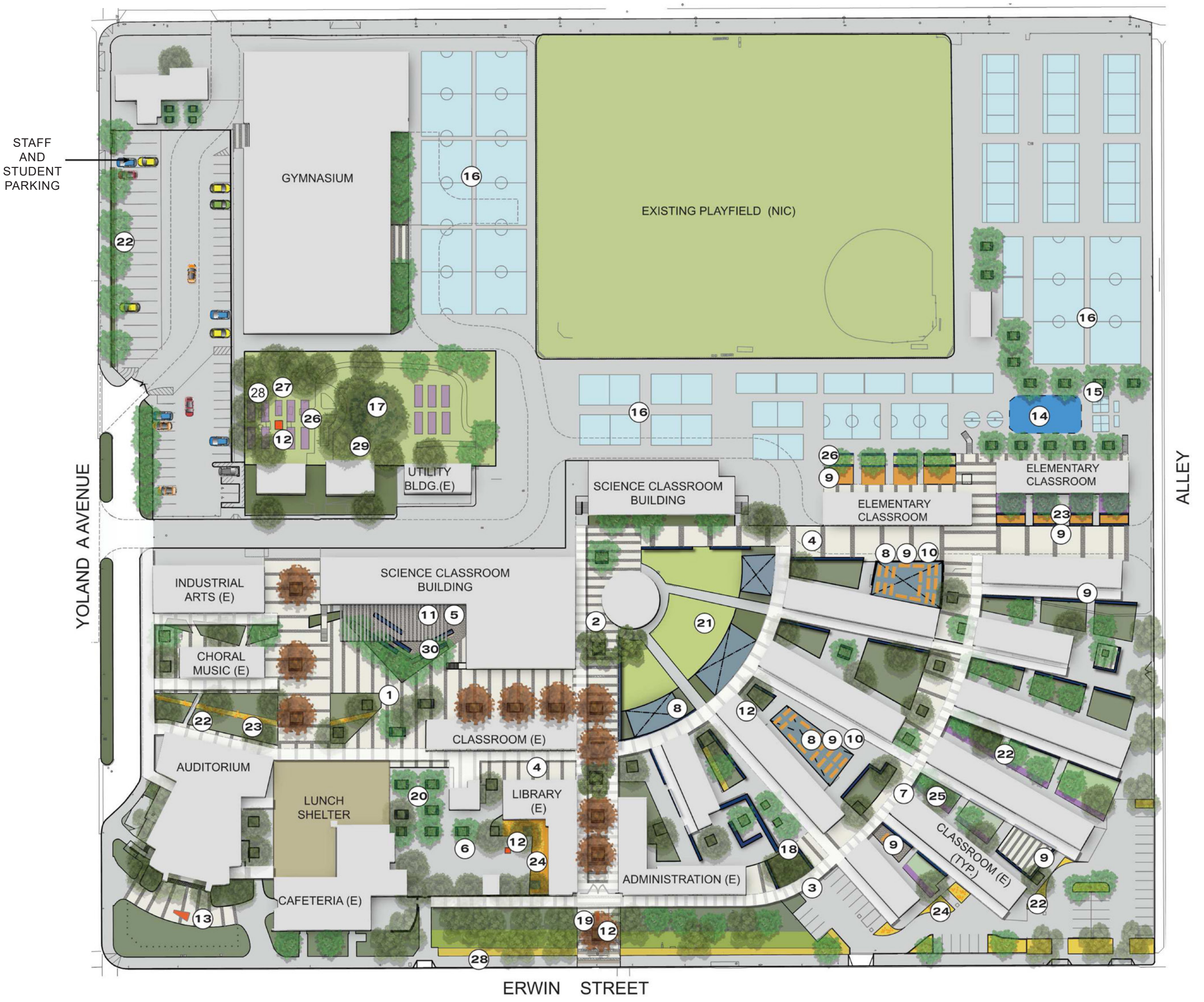
To complete the campus-wide modernization while school is in session, the process must be broken into several phases, as summarized in Table 4 and Figure 11, *Construction Phasing*.

Table 4 Project Phasing

Description
STAGE 1 • Create construction staging area with exclusive driveway on north side of campus • Demolish and remove 6 tennis courts and playcourts • Install utilities for portables • Relocate 6 existing portables for administration offices to northwest campus quadrant • Install 33 new classroom portables on existing east playcourts • Establish temporary main entrance driveway; close existing driveway • Renovate existing administration building • Construct new gymnasium
STAGE 2 • Occupy renovated administration building • Remove 6 portables used for temporary administration offices • Move classes from buildings # 14 through 22, & 37 to portables on east playcourts • Construct new fire access road • Renovate existing southeast quad classroom buildings; replace utilities & infrastructure • Resurface and restripe staff parking lot #1 and #2 in southeast quad
STAGE 3A • Occupy renovated southeast quad classroom buildings • Remove 10 portables from east playcourts • Move 3 portables from northwest quad to east playcourts • Move classes from buildings #7, 10, 5, & 9 to portables on east playcourts • Demolish classroom buildings #7, 10, 5, & 9 • Demolish gymnasium building • Demolish lunch shelter • Renovate auditorium building
STAGE 3B • Install 5 fire access gates along perimeter of campus • Construct new lunch shelter • Construct new art and science technology classroom buildings (2)
STAGE 4A • Occupy new art and science technology classroom buildings (2) • Remove 6 portables from east playcourts • Move elementary classroom to remaining portables on east playcourts • Remove existing 4 elementary school portables and 2 modular buildings • Construct new elementary building
STAGE 4B • Occupy new elementary building • Remove remaining portables from east playcourts • Resurface and stripe east playcourts • Construct field restroom building in northeast quad • Restore turf playfield • Remove construction staging area, and resurface and stripe west playcourts

Note: Interior upgrades would be completed over summer recess and when students are not on campus.

Figure 6 - Conceptual Site Plan



① Entrance Promenade
② Processional Entry
③ Campus Walk
④ Integral Colored Concrete with Acid-Etch Finish
⑤ Permeable Pavers
⑥ Asphaltic Concrete Pavement
⑦ Existing Covered Walkway
⑧ Proposed Cloth Shade Structure
⑨ Breakout Space/Outdoor Learning Area
⑩ Outdoor Seating
⑪ Proposed Metal Shade Canopy
⑫ Educational Kiosk
⑬ Public Entry Art
⑭ Elementary Play Structure
⑮ Painted Games
⑯ Painted Sports Courts
⑰ Existing Tree
⑱ Proposed Shade Tree
⑲ Proposed Ornamental Tree
⑳ Tree Bosque
㉑ Turf
㉒ Bioswale Garden
㉓ Fragrance Garden
㉔ Edible Garden
㉕ Pollinator Garden
㉖ Culinary Garden
㉗ IPM/Habitat Garden
㉘ Native Plant Garden
㉙ Oak Woodland Garden
㉚ Science/Industrial Arts Outdoor Social Space

0 170
Scale (Feet)

Base Map Source: HED, 2016

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Figure 7 - Campus Improvements

Base Map Source: HED, 2016

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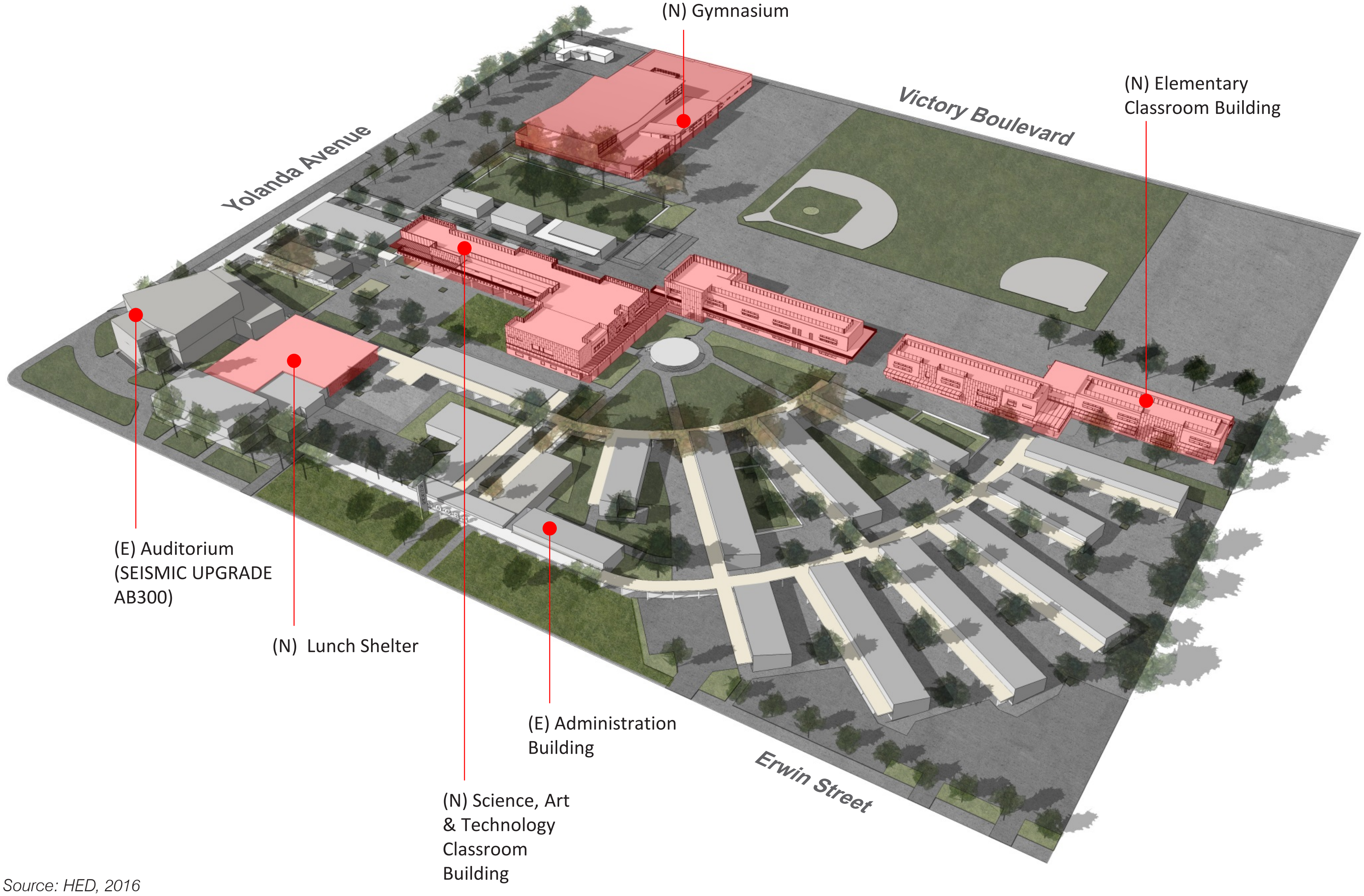
Figure 8 - Conceptual Illustration - Aerial View



Base Map Source: HED, 2016

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Figure 9 - Conceptual Illustration - Central Plaza

Base Map Source: HED, 2016

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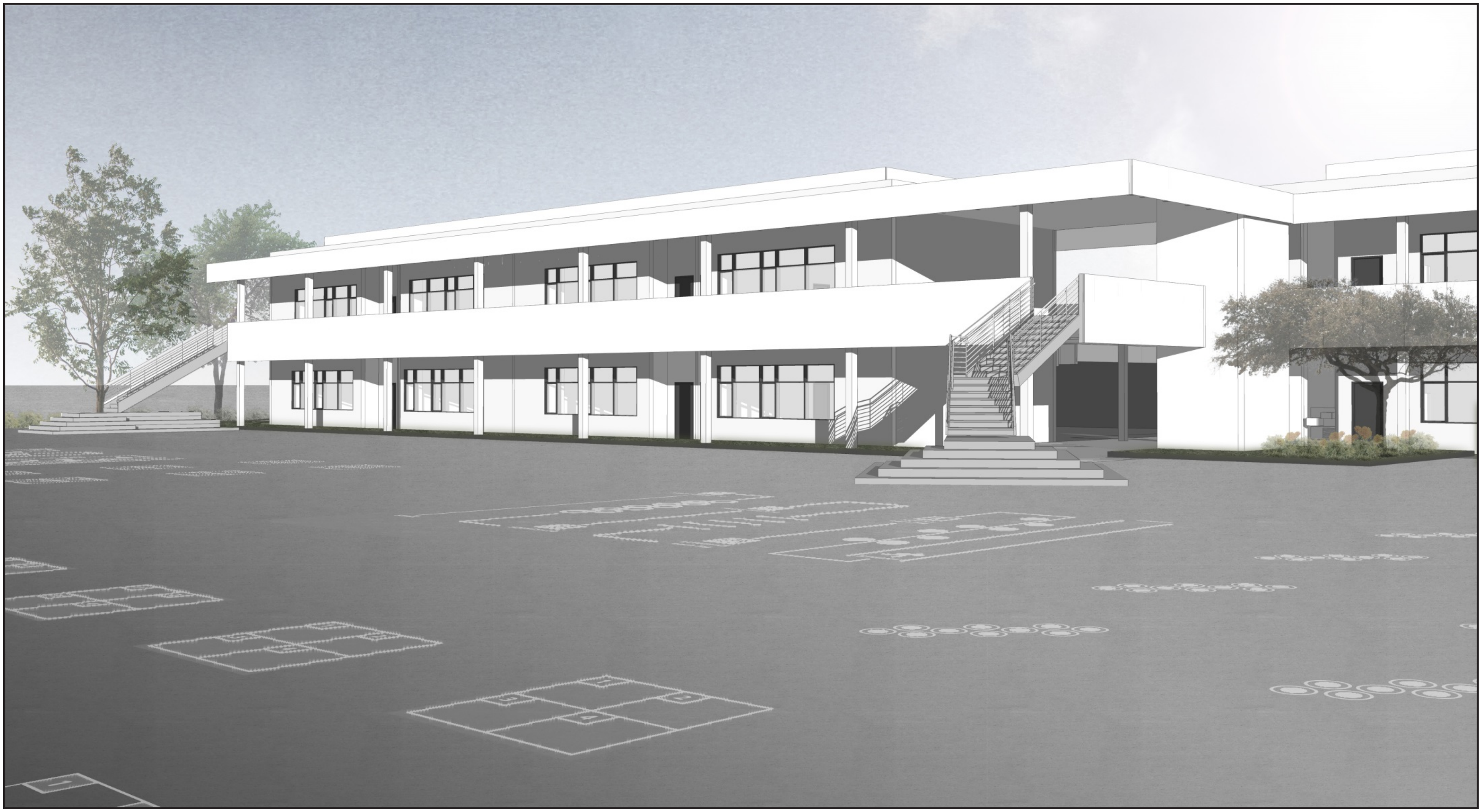
Figure 10 - Conceptual Illustration - Elementary Building



Base Map Source: HED, 2016

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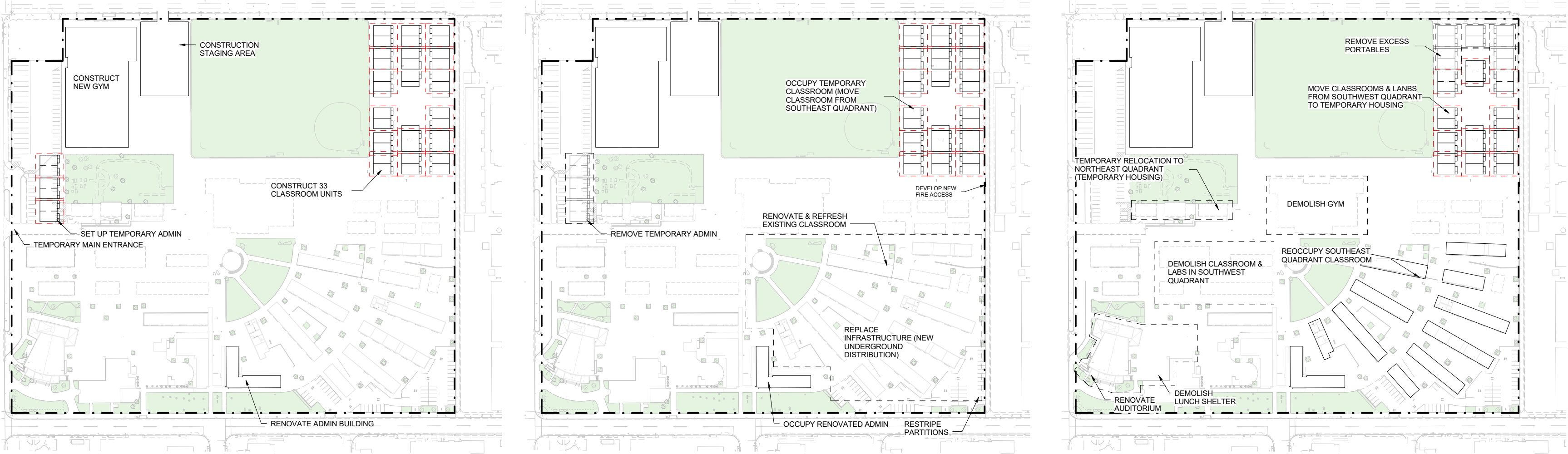
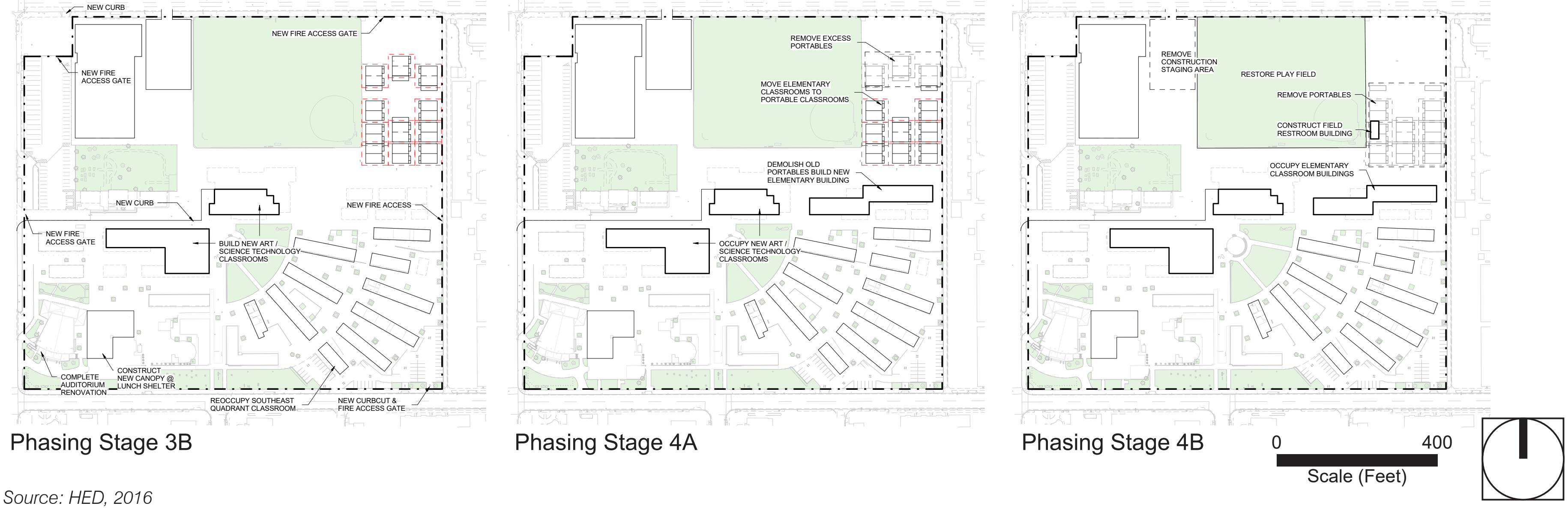
Figure 11 - Construction Phasing



Phasing Stage 1

Phasing Stage 2

Phasing Stage 3A



Phasing Stage 3B

Phasing Stage 4A

Phasing Stage 4B

Base Map Source: HED, 2016

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4. Environmental Checklist and Analysis

Los Angeles Unified School District

Office of Environmental Health and Safety

CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY
CHECKLIST

LEAD AGENCY Los Angeles Unified School District, 333 S. Beaudry Avenue, Los Angeles, CA 90017		**DATE** September 2017
LEAD AGENCY CONTACT Linda Wilde, CEQA Project Manager/Contract Professional LAUSD, Office of Environmental Health and Safety		**PHONE NUMBER** (213) 241-4821
SCHOOL SITE Sherman Oaks Center for Enriched Studies (SOCES)		**SCHOOL SITE ADDRESS** 18605 Erwin Street, Community of Reseda, City of Los Angeles, CA 91335
PROJECT TITLE SOCES Comprehensive Modernization	**LAUSD LOCAL DISTRICT** Northwest	**LAUSD COLIN ID** 10366802

PROJECT DESCRIPTION

The proposed Project encompasses most of the Sherman Oaks Center for Enriched Studies (SOCES) school campus and consists of the comprehensive modernization of the school, including demolition, construction, and renovation activities. The Project includes demolition of the gymnasium, lunch shelter, and four classroom buildings; removal of 12 classrooms in relocatable buildings; construction of two classroom buildings, gymnasium, and lunch shelter; remodel and modernization of auditorium, administration and counseling buildings, and buildings D (Sanitary), K (Classroom), L (Classroom), and N (Classroom). Other improvements include upgrades to campuswide infrastructure, including domestic water; irrigation; gas; sewer; fire, telephone, and data systems; electrical; storm drainage; Americans with Disabilities Act (ADA) compliance; landscape, hardscape, and exterior paint..

ENVIRONMENTAL SETTING

The 21.5-acre SOCES magnet school campus is a largely intact example of a 1950s California school complex; it has 2,100 students in grades 4 to 12. The layout of the school is known as "campus type," where all buildings are one story and open to outdoor hallways. The auditorium, library, and classroom buildings in the southwest campus are classified as cluster-plan, and the administration and classroom buildings in the southeast campus are finger-plan radiating from the center circle quad area. The rear of the property (northern half) has an athletic field, paved playground, and tennis courts.

PROJECT LOCATION

The 21.5-acre SOCES campus is located at 18605 Erwin Street in the Community of Reseda, City of Los Angeles, CA 91335, (Assessor Parcel Number [APN] 2127-012-900) in the west San Fernando Valley. The school is on the southeast corner of Victory Boulevard and Yolanda Avenue.

EXISTING ZONING	**EXISTING LAND USE DESIGNATION**	☐ **REQUIRES STATE FUNDING**
[Q]PF-1XL-RIO (Public Facilities)[29]	Public Facilities[30]	

SURROUNDING LAND USES

The SOCES campus is in an urbanized area surrounded by residential and commercial uses. The school is bordered on the north by Victory Boulevard and single-family residential. Multi-family residential (apartments) and a small strip commercial center are located at the northwest corner of Victory Boulevard and Reseda Boulevard. To the south is Erwin Street and single- and multi-family residential (apartments). To the east is an alleyway and multi-family residential (apartments), a nursery school, and a McDonald's fast-food restaurant. Reseda Boulevard, apartments, and a small used-car dealership are further east. To the west is Yolanda Avenue and single-family residential.

OTHER PUBLIC AGENCY APPROVALS

Reviewing Agencies

- City of Los Angeles, Public Works Department. Permit for curb, gutter, and other offsite improvements
- City of Los Angeles, Fire Department. Approval of plans for emergency access and emergency evacuation. DSA approval of the fire/life safety portion of a project requires local fire authority (LFA) review of: elevator/stair access for emergency rescue and patient transport; access roads, fire lane markings, pavers, and gate entrances; fire hydrant location and distribution; and fire flow (location of post indicator valve, fire department connection, and detector check valve assembly)..
- City of Los Angeles, Department of Transportation. Approval of haul route
- California Department of General Services, Division of State Architect (DSA). Plan review and construction oversight, including structural safety, fire and life safety, and access compliance.
- California Department of Education, School Facilities Planning Division (CDE). If LAUSD is requesting modernization funds from the State Allocation Board (SAB) they must have the plans

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[29] City of Los Angeles. January 18, 2017. ZIMAS [Zone Info and Map Access System]. http://zimas.lacity.org/.

[30] City of Los Angeles. January 18, 2017. ZIMAS [Zone Info and Map Access System]. http://zimas.lacity.org/.

reviewed and approved by the CDE (Education Code Section 17070.50) prior to submitting a funding request. Approval of design for educational appropriateness

- California Office of Historic Preservation (OHP). Review of historic building preservation and renovation plans.
- State Water Resources Control Board (SWRCB). Review of Notice of Intent (NOI) to obtain permit coverage; issuance of general permit for discharges of stormwater associated with construction activity; review of Storm Water Pollution Prevention Plan (SWPPP)
- Los Angeles Regional Water Quality Control Board (LARWQCB). Issue National Pollution Discharge Elimination System (NPDES) permit; Clean Water Act Section 401 Water Quality Certification
- South Coast Air Quality Management District. Review and file submittals for Rule 403, Fugitive Dust; Rule 1403, Asbestos Emissions from Demolition/Renovation Activities; Rule 203, Permit to Operate (boilers and generators); Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil; Rule 1466-Control of Toxic Air Contaminant Emissions from Soil.

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? No Native American tribes have requested notification or consultation through the PRC Section 21080.3.1 process.

> Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process (see PRC Section 21083.3.2). Information may also be available from the California Native American Heritage Commission's Sacred Lands File per PRC Section 5097.94 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that PRC Section 21082.3(c) contains provisions specific to confidentiality.[31]

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[31] Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form. 2016, September 29. The AB 52 regulations adopted by the California Natural Resources Agency were approved by the Office of Administrative Law, and will appear in the California Code of Regulations. Copies of the rulemaking materials can be found at: http://resources.ca.gov/ceqa/.

4. Environmental Checklist and Analysis

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this Project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics
☐ Agriculture & Forestry Resources
☐ Air Quality
☐ Biological Resources
☒ Cultural Resources
☐ Geology & Soils
☐ Greenhouse Gas Emissions
☐ Hazards & Hazardous Materials
☐ Hydrology & Water Quality
☐ Land Use & Planning
☐ Mineral Resources
☐ Noise
☐ Pedestrian Safety
☐ Population & Housing
☐ Public Services
☐ Recreation
☐ Transportation & Traffic
☐ Tribal Cultural Resources
☐ Utilities & Service Systems
☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions on the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed Project, nothing further is required.

SIGNATURE

10/30/2017
DATE

Robert Laughton
PRINTED NAME

Director, OEHS
TITLE

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less that significant with mitigation incorporated, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Less Than Significant with Mitigation Incorporated" applies where the incorporation of a mitigation measure has reduced an effect from "Potentially Significant Impact" to "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analysis," as described in (5) below may be cross referenced).

5) Earlier analysis must be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063 [c)][3][D]). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less Than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A sources list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify:

9) The significance criteria or threshold, if any, used to evaluate each question, and

10) The mitigation measure identified, if any, to reduce the impact to less than significance.

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ENVIRONMENTAL IMPACTS

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-AE-1	School Design Guide[b] This document requires the consideration of architectural appearance and consistency and other aesthetic factors during the preliminary design review for a proposed school upgrade project. Architectural quality must consider compatibility with the surrounding community.

Notes: Text in *italics* shows specific requirements identified in the criteria or condition.
[a] CALGreen. https://www.documents.dgs.ca.gov/bsc/calgreen/mastercalgreennon-resguide2010_2012suppl-3rded_1-12.pdf
[b] LAUSD School Design Guide is updated annually. http://www.laschools.org/new-site/asset-management/school-design-guide.

a) Have a substantial adverse effect on a scenic vista?

No Impact. Vistas provide visual access or panoramic views to a large geographic area. The field of view from a vista location can be wide and extend into the distance.[32] Panoramic views are usually associated with vantage points looking out over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, the ocean, or other water bodies.[33] The school campus and surrounding area are flat and developed with urban land uses, including one-story single-family and two-story multi-family residential buildings. The school campus has 37 one-story buildings, surface parking, play fields, hardcourts, garden area, student gathering areas, and ornamental trees and landscaping. Although the Project would include two-story buildings, there

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[32] City of Los Angeles, LA CEQA Thresholds Guide, Chapter A, 2006. http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

[33] City of Los Angeles, LA CEQA Thresholds Guide, Chapter A, 2006. http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

are no protected or designated scenic vistas or views, and Project development would not obscure any views. Therefore, no impact to scenic vistas would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The only officially designated state scenic highway in Los Angeles County is State Route 2 (SR-2) (Angeles Crest Highway) about 20 miles to the northeast of the school.[34] The proposed structures associated with the Project would not be visible from any designated scenic highway. Project development would not result in impacts to scenic resources within a designated state scenic highway. No impact would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant. The school campus is located in an urbanized area and surrounded by residential and commercial uses. The Project includes demolition of one-story buildings, removal of portable buildings, and construction of two-story buildings, along with other improvements. Views of the school from the surrounding neighborhoods would not significantly change because most of the new buildings are near the center of the campus. However, construction of the new gymnasium on the north side of the property would change the visual character of this section of the school from an asphalt play yard to a one-story building; a higher roof on the south half of the building, away from residents, would accommodate the gymnasium. Because the new building is compatible with the school use and the height and density of the residential use to the north, and the architecture would be complementary to the other campus buildings, this Project component would not substantially degrade the existing visual character or quality of the site and its surroundings.

The three other 2-story buildings would be on the interior of the campus and not fully visible from the surrounding community. Additionally, and as outlined in SC-AE-1, the new buildings will be designed with consideration for architectural appearance and consistency with the other buildings on campus.

The Los Angeles River is located approximately 0.25 mile to the north. The on-campus improvements would not have any effect on the River Improvement Overlay District or the Los Angeles River Revitalization Master Plan. All Project-related construction would take place on campus and would not be seen from the Los Angeles River. Impacts to the visual character and quality of the school campus and surrounding uses would be less than significant.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Less than Significant. The two major causes of light pollution are glare and spill light. Spill light is caused by misdirected light that illuminates areas outside the area intended to be lit. Glare occurs when a bright object is against a dark background, such as oncoming vehicle headlights or an unshielded light bulb.

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[34] California Department of Transportation (Caltrans). Updated September 7, 2011. California Scenic Highway Mapping System. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

The school campus is in an urban setting and is fully developed. The existing school generates nighttime light from security, parking lot, and building lights (interior and exterior). Surrounding land uses also generate considerable light from street lights, vehicle lights, parking lot lights, and building lights.

The proposed Project would not significantly increase nighttime lighting on the campus. The gymnasium building would be on the north edge, and the elementary classroom building would be along the east side of the campus. The side of both buildings would face the street and would only have low level security lighting that would not impact adjacent streets or residents. The other new buildings would be on the interior of the campus. The proposed Project would not include any high-intensity lighting such as is used for athletic fields. Any new security and/or path lights would be directional and would not spill light outside the school campus.

Consistent with CHPS SS 12.0, lighting for the proposed Project would not introduce lights at substantially greater intensities than existing lights on and near the school, and the Project would have no impact on nighttime views. Light and glare impacts would be less than significant.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526) or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Explanation:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The proposed Project would not convert farmland to non-agricultural uses. There is no agricultural or farm use on, or in the vicinity of, the school campus; therefore, no Project-related farmland conversion impact would occur. The school campus is fully developed and is not mapped as important farmland on the California Important Farmland Finder.[35,36] No impact would occur.

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[35] Division of Land Resource Protection (DLRP). 2016, January 27. California Important Farmland Finder. http://maps.conservation.ca.gov/ciff/ciff.html.

[36] Most of urbanized Los Angeles County, including the SOCES campus, is not mapped on the California Important Farmland Finder.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. The proposed Project would not conflict with agricultural zoning or a Williamson Act contract. The existing zoning designation for the site is PF (Public Facility).[37] The site is not zoned for agricultural use, and Project development would not conflict with such zoning. Williamson Act contracts restrict the use of privately-owned land to agriculture and compatible open-space uses under contract with local governments; in exchange, the land is taxed based on actual use rather than potential market value. There is no Williamson Act contract in effect onsite. No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact. Project development would not conflict with existing zoning for forest land, timberland, or timberland production. Forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."[38] Timberland is defined as "land… which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees."[39] The school campus is zoned for school use as a public facility and is not zoned for forest land or timberland use.[40] No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Construction of the proposed Project would not result in the loss or conversion of forest land. No vegetation onsite is cultivated for forest resources. Vegetation is limited to ornamental trees, shrubs, turf, and a school garden. No forest land would be affected by the proposed Project, and no impacts would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There is no mapped important farmland or forest land on or near the school campus, and Project development would not indirectly cause conversion of such land to non-agricultural or non-forest use. No impact would occur.

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[37] City of Los Angeles. 2016. ZIMAS [Zone Info and Map Access System]. http://zimas.lacity.org/.

[38] California Public Resources Code Section 12220[g].

[39] California Public Resources Code Section 4526.

[40] City of Los Angeles. 2016. ZIMAS [Zone Info and Map Access System]. http://zimas.lacity.org/.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-AQ-2	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive emissions are not generated by unmaintained equipment.
SC-AQ-3	LAUSD's construction contractor shall: • Maintain slow speeds with all vehicles. • Load impacted soil directly into transportation trucks to minimize soil handling. • Water/mist soil as it is being excavated and loaded onto the transportation trucks. • Water/mist and/or apply surfactants to soil placed in transportation trucks prior to exiting the site. • Minimize soil drop height into transportation trucks or stockpiles during dumping. • During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks. • Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed. • Place stockpiled soil on polyethylene sheeting and cover with similar material. • Place stockpiled soil in areas shielded from prevailing winds.
SC-AQ-4	LAUSD shall prepare an air quality assessment. If site-specific review of a school construction project identifies potentially significant adverse regional and localized construction air quality impacts, then LAUSD shall implement all feasible measures to reduce air emissions below the South Coast Air Quality Management District's (SCAQMD) regional and localized significance thresholds. LAUSD shall mandate that construction bid contracts include the measures identified in the air quality assessment. Measures shall reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations. Specific air emission reduction measures include, but are not limited to, the following: Exhaust Emissions • Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM).

- Consolidate truck deliveries and/or limit the number of haul trips per day.
- Route construction trucks off congested streets.
- Employ high pressure fuel injection systems or engine timing retardation.
- Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or less (ULSD) in all diesel construction equipment.
- Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower.
- Restrict non-essential diesel engine idle time, to not more than five consecutive minutes.
- Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction.
- Utilize electric or alternatively fueled equipment, if feasible.
- Utilize construction equipment with the minimum practical engine size.
- Utilize low-emission on-road construction fleet vehicles.
- Ensure construction equipment is properly serviced and maintained to the manufacturer’s standards.

Fugitive Dust

- Apply non-toxic soil stabilizers according to manufacturers’ specification to all inactive construction areas (previously graded areas inactive for ten days or more).
- Replace ground cover in disturbed areas as quickly as possible.
- Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water).
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles.
- Pave all construction access roads for at least 100 feet from the main road to the project site.
- Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall.
- Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers’ specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph).
- Apply water at least three times daily, except during periods of rainfall, to all unpaved road surfaces.
- Limit traffic speeds on unpaved roads to 15 mph or less.
- Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD.
- Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials.
- Limit the amount of daily soil and/or demolition debris loaded and hauled per day.

General Construction

- Utilize ultra-low VOC or zero-VOC surface coatings.
- Phase construction activities to minimize maximum daily emissions.
- Configure construction parking to minimize traffic interference.
- Provide temporary traffic control during construction activities to improve traffic flow (e.g., flag person).
- Develop a trip reduction plan for construction employees.
- Implement a shuttle service to and from retail services and food establishments during lunch hours.
- Increase distance between emission sources to reduce near-field emission impacts.
- Require construction contractors to document compliance with the identified mitigation measures.

Air quality background and modeling data are included as Appendix A to this Initial Study.

The primary air pollutants of concern for which ambient air quality standards (AAQS) have been established are ozone (O_3), carbon monoxide (CO), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxide, and lead. Areas are classified under the federal and California Clean Air Act as either in attainment or nonattainment for each criteria pollutant based on whether the AAQS have been achieved. The South Coast Air Basin (SoCAB), which is managed by the SCAQMD, is designated nonattainment for O_3, and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead (Los Angeles County only) under the National AAQS.[41]

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The most recently adopted comprehensive plan for the SoCAB is the 2016 Air Quality Management Plan (AQMP), adopted on March 3, 2017. Regional growth projections are used by SCAQMD to forecast future emission levels in the SoCAB. For southern California, these regional growth projections are provided by the Southern California Association of Governments (SCAG) and are partially based on land use designations in city and county general plans. Typically, only large, regionally significant projects have the potential to affect the regional growth projections.

The proposed Project involves the renovation and demolition of several existing school buildings in addition to construction of new school facility buildings. The planned improvements would not result in an increase in the number of students. Thus, the proposed Project would not have the potential to substantially affect SCAG's demographic projections, so it would not affect SCAG's demographic projections. Additionally, as discussed in Section III(b) below, the net change in operation-phase related emissions would be less than the SCAQMD emissions thresholds, and is not a substantial source of air pollutant emissions that could affect the attainment designations in the SoCAB. Therefore, the proposed Project would not affect the regional emissions inventory and would not conflict with strategies in the AQMP. Impacts would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact.

Short-Term Air Quality

Construction activities would result in the generation of air pollutants. These pollutants would primarily be from: 1) exhaust emissions from off-road diesel-powered construction equipment; 2) dust generated by demolition, earth-moving, and other construction activities; 3) exhaust emissions from on-road vehicles and 4) off-gas emissions of volatile organic compounds (VOCs) from application of asphalt, paints, and coatings.

Demolition, construction, and modernization activities are anticipated to take approximately 36 months (two 18-month sequential phases) and is anticipated to start in Q3-2018. Construction emissions were estimated

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[41] California Air Resources Board (CARB). 2014, August 22. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

using the California Emissions Estimator Model (CalEEMod), version 2016.3.1, based on the construction schedule, phasing, and equipment list provided by LAUSD. The analysis also includes implementation and compliance with CHPS prerequisite criteria and LAUSD Standards Conditions of Approval. The construction schedule and equipment mix were based on preliminary designs and are subject to minor changes during final design and as dictated by field conditions. Results of the construction emission modeling are shown in Table 5. As shown, air pollutant emissions from construction-related activities would be less than SCAQMD regional thresholds, and therefore, impacts would be less than significant.

Table 5 Maximum Daily Regional Construction Emissions

	Criteria Air Pollutants (lbs/day)[1,2,3]					
Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1						
2018						
Asphalt Demolition	4	28	27	<1	2	2
2019						
Asphalt Demolition	3	25	26	<1	2	2
Site Preparation	2	27	18	<1	2	1
Building Construction	3	33	28	<1	2	2
Temporary Portables Installation and Building Construction Overlap	4	39	31	<1	2	2
2020						
Building Construction	3	30	28	<1	2	1
Building Construction and Architectural Coating Overlap	18	32	30	<1	2	2
Asphalt Paving	2	14	14	<1	1	1
Temporary Portables Removal	<1	6	2	<1	<1	<1
Building Demolition	3	27	28	<1	3	2
Phase 2						
2020						
Site Preparation	2	25	18	<1	2	1
Building Construction	3	30	27	<1	2	1
2021						
Building Construction	3	27	27	<1	2	1
Building Construction and Architectural Coating Overlap	22	29	29	<1	2	1
Demolition	3	20	26	<1	2	1
Building Construction (grades 4-6)	3	27	27	<1	2	1
Building Construction and Architectural Coating (grades 4-6) Overlap	11	29	29	<1	2	1
Temporary Portables Removal	<1	6	2	<1	<1	<1
Asphalt Paving	1	13	13	<1	1	1

Table 5 Maximum Daily Regional Construction Emissions

Source	Criteria Air Pollutants (lbs/day)[1,2,3]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2022						
Asphalt Paving	1	12	13	<1	1	1
Maximum Daily Emissions Phase 1 and 2						
Maximum Daily Emissions	22	30	31	<1	3	2
SCAQMD Regional Threshold	75	100	550	150	150	55
Exceeds Regional Threshold?	No	No	No	No	No	No

Source: CalEEMod, version 2016.3.1.
Notes: Totals may not equal 100 percent due to rounding.

[1] The construction schedule is based on information provided by the LAUSD. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.

[2] Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403 and consistent with LAUSD Standard Condition of Approval SC-AQ-3 and SC-AQ-4, including reducing the speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

[3] The proposed Project would incorporate LAUSD Standard Conditions of Approval SC-AQ-2, which requires ensuring that construction equipment is properly tuned and maintained. This requirement would further reduce generation of criteria air pollutant emissions during construction.

Long-Term Air Quality

Long-term air pollutant emissions are typically generated by area sources (e.g., landscaping equipment fuel use, aerosols, and architectural coatings), mobile sources from vehicle trips, and energy use (natural gas) associated with new buildings. The project includes demolition of the gymnasium, lunch shelter, and four classroom buildings; removal of seven relocatable buildings; construction of two classroom buildings, gymnasium, and lunch shelter; and remodel and modernization and upgrades to the rest of the campus. While the Project would result in an increase of 49,028 square feet of building space over existing conditions, the new buildings would meet the latest Building Energy Efficiency Standards and the California Green Building Standards Code (CALGreen) and would be more energy efficient than the buildings that are proposed for demolition. In addition, the primary source of long-term criteria air pollutant emissions are mobile sources. Because the Project would not increase the number of students or capacity of the school, it would not introduce new vehicle trips. The Project would not result in an increase in long-term criteria air pollutant emissions. Therefore, regional operation-phase air quality impacts would be less than significant.

c) **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

Less Than Significant Impact. The SoCAB is designated nonattainment for O_3 and $PM_{2.5}$ under the California and National AAQS, nonattainment for PM_{10} under the California AAQS, and nonattainment for lead under the National AAQS.[42] According to SCAQMD methodology, any project that does not exceed or

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[42] California Air Resources Board (CARB). 2015, December. Area Designations Maps/State and National. http://www.arb.ca.gov/desig/adm/adm.htm.

can be mitigated to less than the daily threshold values would not add significantly to a cumulative impact.[43] As discussed in Section III(b), construction and operational activities would not result in emissions in excess of SCAQMD's significant thresholds. Therefore, the Project would not result in a cumulatively considerable net increase in criteria pollutants and impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The proposed Project could expose sensitive receptors to elevated pollutant concentrations if it causes or contributes significantly to elevated pollutant concentration levels. Unlike regional emissions, localized emissions are evaluated in terms of air concentration rather than mass so they can be more readily correlated to potential health effects.

Construction Localized Significance Thresholds

Localized significance thresholds (LSTs) are based on the California AAQS, which are the most stringent AAQS that have been established to provide a margin of safety in the protection of public health and welfare. They are designated to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, young children, people already weakened by other disease or illness, and people engaged in strenuous work or exercise. Construction LSTs are based on the size of the construction area, distance to the nearest sensitive receptor, and source receptor area. The nearest offsite receptors to the construction area are the adjacent multi-family residences to the east and single-family residences to the west across Yolanda Avenue and to the south across Erwin Street.

Air pollutant emissions generated by construction activities would cause temporary increases in air pollutant concentrations. Table 6 shows the maximum daily construction emissions (pounds per day) generated during construction activities compared with the SCAQMD's screening-level construction LSTs. The maximum daily NO_x, CO, PM_{10}, and $PM_{2.5}$ construction emissions generated from onsite construction-related activities would be less than SCAQMD screening-level construction LSTs. Therefore, Project-related construction activities would not expose sensitive receptors to substantial pollutants, and localized construction air quality impacts would be less than significant.

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[43] South Coast Air Quality Management District (SCAQMD). 1993. California Environmental Quality Act Air Quality Handbook.

Table 6 Localized Construction Emissions

Source	Pollutants(lbs/day)[1,2]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Phase 1				
Asphalt Demolition – 2018	26	25	2	2
Asphalt Demolition – 2019	23	25	2	2
Site Preparation – 2019	16	15	1	1
Building Construction – 2019	30	26	1	1
Building Construction and Temporary Portables Installation – 2019	26	28	2	2
Building Construction – 2020	28	26	1	1
Building Construction and Architectural Coating Overlap – 2020	29	28	1	1
Paving – 2020	12	12	1	1
Temporary Portable Buildings Removal – 2020	5	2	<1	<1
Building Demolition – 2020	23	26	2	1
SCAQMD LST[3,4]	**103**	**426**	**4**	**3**
Exceeds LST?	No	No	No	No
Phase 2				
Site Preparation – 2020	15	14	1	1
Building Construction – 2020	28	26	1	1
Building Construction – 2021	25	25	1	1
Building Construction and Architectural Coating Overlap – 2021	27	27	1	1
Demolition – 2021	20	25	1	1
Building Construction (grades 4-6) – 2021	25	25	1	1
Building Construction and Architectural Coating (grades 4-6) Overlap - 2021	27	27	1	1
Temporary Portables Removal – 2021	5	2	<1	<1
Paving – 2021	11	12	1	1
Paving – 2022	10	12	<1	<1
SCAQMD LST[3]	**103**	**426**	**4**	**3**
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.1.

Notes: In accordance with SCAQMD methodology, only onsite stationary sources and mobile equipment occurring on the on campus are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus in Source Receptor Area (SRA) 6.

[1] The construction schedule is based on information provided by the District. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.

[2] Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

[3] The LST Methodology uses lookup tables based on site acreage to determine the significance of emissions for CEQA purposes. The ≤1.00 acre disturbed is the maximum daily disturbed acreage determined using the equipment mix for the different construction activities for this project.

[4] South Coast Air Quality Management District (SCAQMD). 2008, June. Final Localized Significance Threshold Methodology. http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds; SCAQMD. 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf.

Construction Emission Health Risk

Emissions from construction equipment primarily consist of diesel particulate matter (DPM). In March 2015 the Office of Environmental Health Hazards Assessment (OEHHA) adopted new guidance for the preparation of health risk assessments. OEHHA developed a cancer risk factor and non-cancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. The proposed Project would be constructed over approximately 36 months, which would limit the exposure to receptors. Additionally, construction activities would not exceed the screening-level LST significance thresholds. Therefore, construction emissions would not pose a threat to receptors at or near the school campus, and Project-related construction health impacts would be less than significant.

Operation Localized Significance Thresholds

Operation of the proposed Project would not generate substantial quantities of emissions from onsite stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions include industrial land uses, such as chemical processing and warehousing operations where substantial truck idling could occur onsite. The proposed Project does not fall within these uses. While operation of the proposed Project would result in the use of standard mechanical equipment such as heating, ventilation, and air conditioning (HVAC) units in the new buildings, air pollutant emissions generated from these activities would be nominal. Therefore, localized air quality impacts related to stationary-source emissions would be less than significant.

Carbon Monoxide Hotspots

The SoCAB has been designated "attainment" for CO under both the national and California AAQS. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO "hotspot" impact.[44] The proposed Project would not increase the number of students and would not result in generation of additional vehicle trips. Thus, the proposed Project would not increase CO hotspots at intersections in the vicinity of the school. Localized air quality impacts related to mobile-source emissions would be less than significant.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The proposed Project would not result in objectionable odors. The threshold for odor is if a project creates an odor nuisance pursuant to SCAQMD Rule 402, Nuisance, which states:

> A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury

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[44] Bay Area Air Quality Management District (BAAQMD). 2011, Revised. California Environmental Quality Act Air Quality Guidelines. BAAQMD has specific screening criteria for determining CO impacts and SCAQMD does not.

> or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Operation of the new school building and other campus improvements would not include these or comparable uses and as such would not create an odor nuisance. Construction of the proposed Project would include emissions from diesel construction equipment and VOCs from architectural coatings and paving activities which may generate odors. However, these odors would be low in concentration, temporary, and are not expected to affect a substantial number of people. Therefore, odor impacts would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (e.g., oak trees or California walnut woodlands)?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Condition of Approval applies to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-BIO-3	LAUSD shall comply with the following: • Project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates) should occur outside of avian breading season to avoid take of birds or their eggs. Depending on the avian species present, a qualified biologist may determine that a change in the breeding season dates is warranted. • If avoidance of the avian breeding season is not feasible, beginning 30 days prior to the initiation of the project activities, a qualified biologist with experience in conducting breeding bird surveys shall conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). The surveys shall continue on a weekly basis with the last survey being conducted no more than three days prior to the initiation of project activities. If a protected native bird is found, LAUSD shall delay all project activities within 300 feet of the suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, project activities within 300 feet of the nest (within 500 feet for raptor nests), or as determined by a qualified biologist, shall be postponed until the nest is vacated and juveniles have fledged and there is no evidence

	of a second attempt at nesting. Flagging, stakes, and/or construction fencing shall be used to demarcate the inside boundary of the 300- or 500-foot buffer between the project activities and the nest. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. LAUSD shall provide results of the recommended protective measures to document compliance with applicable State and Federal laws pertaining to the protection of native birds. • If the qualified biologist determines that a narrower buffer between the project activities and observed active nests is warranted, a written explanation as to why (e.g., species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the project activities and the nest and foraging areas) shall be submitted to LAUSD OEHS project manager. Construction contractors can then reduce the demarcated buffer. • No construction shall occur within the fenced nest zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer be impacted the construction. • A biological monitor shall be present on site during all grubbing and clearing of vegetation to ensure that these activities remain outside the demarcated buffer and that the flagging, stakes, and/or construction fencing are maintained, and to minimize the likelihood that active nests are abandoned or fail due to project activities. The biological monitor shall send weekly monitoring reports to LAUSD OEHS project manager during the grubbing and clearing of vegetation, and shall notify LAUSD immediately if project activities damage avian nests.

The information in this section is based partly on the “City of Los Angeles Protected Tree Report” prepared by Carlberg Associates, dated December 15, 2016. A complete copy of this report is included as Appendix B to this Initial Study.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. The school campus is fully developed with most of the site consisting of buildings, asphalt, and concrete.[45] Vegetation onsite is limited to ornamental trees, shrubs, and turf. There is no native habitat and no suitable habitat for threatened, endangered, or rare species onsite. No impact would occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact. No locally designated natural communities or riparian habitats exist on the school campus. While a segment of the Los Angeles River is located approximately 0.25 mile to the north, this segment is concrete lined and does not support any habitat for threatened, endangered, or rare species. The school is not within an adopted habitat conservation plan, natural community conservation plan, or similar plan. The school is neither within nor proximate to any significant ecological area, land trust, or conservation plan.[46] No impact would occur.

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[45] City of Los Angeles. 2017. ZIMAS [Zone Info and Map Access System]. http://zimas.lacity.org/.

[46] Los Angeles County Department of Regional Planning, Significant Ecological Area Update Study 2000. Figure 1 Significant Ecological Areas Update Study 200 Existing Boundaries. http://planning.lacounty.gov/sea/faqs.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No Impact. The school campus is fully developed and there are no protected wetlands onsite. The proposed Project would be confined to the school campus and would not have the potential to impact any offsite protected wetland areas. No impact would occur.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact. Most of the campus consists of buildings, asphalt, and concrete. The school campus does not have any natural native habitat or wildlife corridors. However, 117 trees of various species, sizes, and maturity are currently spread throughout the school campus and may provide nesting sites for resident or migratory birds.[47] The proposed Project would require removal of 21 trees.

Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Additionally, the California Fish and Game Code, Sections 3503, 3503.5, and 3513, prohibits the take of all birds and their active nests, including raptor and other migratory nongame birds.

The District would comply with the MBTA and Fish and Game Code and would implement SC-BIO-3, which would ensure that if construction occurs during the avian breeding season, appropriate measures would be taken to avoid impacts to nesting birds. With implementation of these laws, regulations, and conditions, nesting bird impacts would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. Several species of native California trees are protected by City of Los Angeles Tree Preservation Ordinance No. 177.404: Oak trees, including valley oak (*Quercus lobata*) and California live oak (*Q. agrifolia*), or any other tree of the oak genus indigenous to California but excluding the scrub oak (*Q. dumosa*); Southern California black walnut (*Juglans californica*); western sycamore (*Platanus racemosa*); and California bay (*Umbellularia californica*).[48]

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[47] City of Los Angeles Protected Tree Report. Sherman Oaks Center of Enriched Studies. 18605 Erwin Street, Los Angeles, California 91335. Prepared by Cy Carlberg, ASCA Registered Consulting Arborist. December 15, 2016. See Appendix B of this Initial Study.

[48] An ordinance amending various provisions of Articles 2 and 7 of Chapter I and Article 6 of Chapter IV and Section 96.303.5 of the Los Angeles Municipal Code to assure the protection of, and to further regulate the removal of, protected trees. http://cityplanning.lacity.org/Code_Studies/Other/ProtectedTreeOrd.pdf.

The school campus currently has 117 trees, including 3 protected oak trees and 114 nonprotected trees.[49] Implementation of the Project will result in removal of 21 non-protected trees. None of the three protected trees are being proposed for removal. No City of Los Angeles rights-of-way trees are associated with this Project. No trees considered "protected" by the City of Los Angeles Tree Preservation Ordinance No. 177.404 would be affected. There are no off-site trees on contiguous properties that can be affected by the construction of the proposed Project.

The Project includes a landscape plan to offset the loss of trees on campus. Replacement trees will be planted at the appropriate size at maturity for the space, and will be selected from LAUSD's Approved Plant List.[50] Implementation of the proposed Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. No impacts would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No locally designated natural communities exist on the school campus. The school is not within an adopted habitat conservation plan, natural community conservation plan, or similar plan. The school is neither within nor proximate to any significant ecological area, land trust, or conservation plan.[51] No impact would occur.

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[49] Total trees reflect 14 nonprotected trees that were removed between June and December 2016. City of Los Angeles Protected Tree Report. Sherman Oaks Center of Enriched Studies. 18605 Erwin Street, Los Angeles, California 91335. Prepared by Cy Carlberg, ASCA Registered Consulting Arborist. December 15, 2016. See Appendix X of this Initial Study.

[50] LAUSD Approved Plant List. http://www.laschools.org/documents/file?file_id=310944045.

[51] Los Angeles County Department of Regional Planning, Significant Ecological Area Update Study 2000. Figure 1 Significant Ecological Areas Update Study 200 Existing Boundaries. http://planning.lacounty.gov/sea/faqs.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a. Cause a substantial adverse change in significance of a historical resource as defined in CEQA Guidelines Section 15064.5?	☒	☐	☐	☐
b. Cause a substantial adverse change in significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	☐	☐	☒	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-CUL-1	**Design Team to Include Qualified Historic Architect** For campuses with qualifying historical resources under CEQA, the Design Team shall include a qualified Historic Architect. The Historic Architect shall provide input to ensure ongoing compliance, as project plans progress, with the Secretary of the Interior's Standards and LAUSD requirements and guidelines for the treatment of historical resources (specific requirements follow in SC-CUL-2). For projects involving structural upgrades to historic resources, the Design Team shall include a qualified Structural Engineer with a minimum of eight (8) years of demonstrated project-level experience in Historic Preservation. The Historic Architect/s shall meet the Secretary of the Interior's Professional Qualifications Standards and the standards described on page 8 of the LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The Historic Architect shall provide input throughout the design and construction process to ensure ongoing compliance with the above-mentioned standards.
SC-CUL-2	**Role of Historic Architect on Design Team** The tasks of the Historic Architect on the Design Team shall include (but not necessarily be limited to) the following. The Historic Architect shall work with the Design Team and LAUSD to ensure that project components, including new construction and modernization of existing facilities, continue to comply with applicable historic preservation standards, including the Secretary of the Interior's Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The Historic Architect shall work with the Design Team throughout the design process to develop project options that facilitate compliance with the applicable historic preservation standards. For new construction, the Historic Architect shall work with the Design Team and LAUSD to identify options and opportunities for (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, and (2) ensuring that new construction is designed and sited in such a way that reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors throughout campus. For modernization and upgrade projects involving contributing (significant) buildings or features, the Historic Architect shall work with the Design Team and LAUSD to ensure that specifications for design and implementation of projects comply with the applicable historic preservation standards. The Historic Architect shall participate in Design Team meetings through all phases of the project through 100 percent

	construction drawings, pre-construction, and construction phases. The Historic Architect shall produce brief memos, at the 50 percent and 100 percent construction drawings stages, demonstrating how principal project components and treatment approaches comply with applicable historic preservation standards, including the Secretary of the Interior's Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The memos will be reviewed by LAUSD. The Historic Architect shall participate in pre-construction and construction monitoring activities to ensure continuing conformance with Secretary's Standards and/or avoidance of a material impairment of the historical resources. The Historic Architect shall provide specialized Construction Specifications Institute (CSI) specifications for architectural features or materials requiring restoration, removal, or on-site storage. This shall include detailed instructions on maintaining and protecting in place relevant features. The Design team and Historic Architect shall be responsible for incorporating LAUSD's recommended updates and revisions during the design development and review process.
SC-CUL-3	**School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools** LAUSD has adopted policies and guidelines that apply to projects involving historic resources. The Design-Builder and Historic Architect shall apply these guidelines, which include the LAUSD School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools and the Secretary's Standards for all new construction and upgrade/modernization projects. In keeping with the district's adopted policies and goals, LAUSD shall re-use rather than destroy historical resources where feasible. LAUSD shall follow the guidelines outlined in these documents to the maximum extent practicable when planning and implementing projects and adjacent new construction involving historical resources. General guidelines shall include: • Retain and preserve the historic character of buildings, structures, landscapes, and site features that are historically significant. • Repair rather than remove, replace, or destroy character-defining features; if replacement is necessary, replace in-kind to match in materials and appearance. • Avoid removing, obscuring, or destroying character-defining features and materials. • Treat distinctive architectural features or examples of skilled craftsmanship that characterize a building with sensitivity. • Conceal reinforcement required for structural stability or the installation of life safety or mechanical systems. • Undertake surface cleaning, preparation of surfaces, and other projects involving character-defining features using the least invasive, gentlest means possible. Avoid sandblasting and chemical treatments.
SC-CUL-4	Prior to demolition or mothballing activities, LAUSD shall retain a professional architectural photographer and a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards to prepare HABS-like documentation for the historical resources slated for demolition. The HABS-like package will document in photographs and descriptive and historic narrative the historical resources slated for demolition. Documentation prepared for the package will draw upon primary- and secondary-source research and available studies previously prepared for the project. Measured drawings shall not be required for the project. The specifications for the HABS-like package follow: **Photographs:** Photographic documentation will focus on the historical resources/features slated for demolition, with overview and context photographs for the campus and adjacent setting. Photographs will be taken of interior and exterior features of the buildings using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Photographs will include context views, elevations/exteriors, architectural details, overall interiors, and interior details (if warranted). Digital photographs will be printed in black and white on archival film paper and also provided in electronic format. **Descriptive and Historic Narrative:** The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each resource, elevation by elevation, with accompanying photographs, and information on how the resource fits within the broader campus during its period of significance. The historic narrative will include available information on the campus design, history, architect/contractor/designer as appropriate, area history, and historic context. In addition, the narrative will include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate. **Historic Documentation Package Submittal:** The draft package will be assembled by the historian or architectural historian and submitted to LAUSD for review and comment. After final approval, one hard-copy set of the package will be prepared as

	follows: Photographs will be individually labeled and stored in individual acid-free sleeves. The remaining components of the historic documentation package (site map, photo index, historic narrative, and additional data) will be printed on archival bond, acid-free paper. Upon completion of the descriptive and historic narrative, all materials will be compiled in electronic format and presented to LAUSD for review and approval. Upon approval, one hard-copy version of the historic documentation package will be prepared and submitted to LAUSD. The historian or architectural historian shall offer a hardcopy package and compiled, electronic version of the final package to the Los Angeles Public Library (Central Library), Los Angeles Historical Society, and the South Central Coastal Information Center, to make available to researchers.
SC-CUL-5	LAUSD, consistent with Education Code Section 17540, shall offer to sell any useful features of the school building (e.g., the school bell, chalkboards, lockers) that do not contain hazardous materials for use or display, if features are not retained by LAUSD for reuse or display.
SC-CUL-6	LAUSD, consistent with Education Code Section 17545, shall offer for sale any remaining functional and defining features and building materials from the buildings. These materials could include doors, windows, siding, stones, lighting, doorknobs, hinges, cabinets, and appliances, among others. They shall be made available to the public for sale and reuse, if features are not retained by LAUSD for reuse or display.
SC-CUL-7	The preservation architect shall participate in pre-construction and construction monitoring activities to ensure continuing conformance with Secretary's Standards and/or avoidance of a material impairment of the historical resources.
SC-CUL-8	LAUSD shall retain a professional architectural photographer and an architectural historian that meets the Secretary of the Interior's Professional Qualifications Standards (Architectural Historian) to implement Historic American Building Survey (HABS) Level II documentation or closely following the HABS Level II outline format. Documentation shall include drawings, photographs, and written data for each building/structure/element. For all levels of documentation, the following quality standards shall be met: Large format photographs: Photographic documentation shall include the current status of all recognized historic resources or any contributors to a historic district and the existing surrounding setting. Large format photographs shall clearly depict the appearance of the property and areas of significance of the recorded building, site, structure, or object. Each view shall be perspective corrected and fully captioned. All shall be archivally processed and prints shall be made on fiber-based paper. Two original negatives (large format 4-inch by 5-inch black and white negatives) shall be made at the time the photographs are taken, two sets of contact prints, and three sets of 8-inch by 10-inch prints shall be processed. • one set of negatives and one set of contact prints shall be archived at the National Park Service for entry into the HABS collection in the Library of Congress • one set of negatives and one set prints shall be archived at Los Angeles Public Library at the Central Library. • one set of prints shall be archived at the Los Angeles City Historical Society. • one set of prints shall be archived at LAUSD. Narrative description: 1) Written history and description shall be based on primary sources to the greatest extent possible. A frank assessment of the reliability and limitations of sources shall be included. Within the written history, statements shall be footnoted as to their sources, where appropriate. The written data shall include a methodology section specifying name of researcher, date of research, sources searched, and limitations of the project; 2) the architectural historian shall prepare a narrative description (closely following the Historic American Buildings Survey Level II outline format) of historical architectural resources, including Department of Parks and Recreation (DPR) series forms. Document Submittal: The draft documentation shall be assembled by the architectural historian and submitted to the LAUSD Architectural Master Reviewer for review and comment. Architectural Master Reviewer shall give final approval prior and receive final documentation prior to submittal to the repositories and prior to work on the project. LAUSD shall submit the LAUSD-approved final documentation to the Los Angeles Public Library at the Central Library and the South Central Coastal Information Center.
SC-CUL-9	LAUSD shall provide OHP and the Los Angeles Conservancy copies of all negative declarations and environmental impact reports.
SC-CUL-10	LAUSD, consistent with Education Code Section 17540, shall offer to sell any useful features of the school building (e.g., the school bell, chalkboards, lockers) that do not contain hazardous materials for use or display, if features are not retained by LAUSD for reuse or display.
SC-CUL-11	Historical Resource. LAUSD, consistent with Education Code Section 17545, shall offer for sale any remaining functional and defining features and building materials from the buildings. These materials could include doors, windows, siding, stones, lighting, doorknobs, hinges, cabinets, and appliances, among others. They shall be made available to the public for sale and reuse, if features are not retained by LAUSD for reuse or display.

SC-CUL-12	LAUSD shall retain a qualified archaeologist to be available on-call. The qualified archaeologist shall meet the Secretary of the Interior's Professional Qualifications Standards (48 Federal Register 44738–39).
SC-CUL-13	Historical and Archaeological Resource. The contractor shall halt construction activities in the immediate area and notify the LAUSD. LAUSD shall retain a qualified archeologist to make an immediate evaluation of significance and appropriate treatment of the resource. To complete this assessment, the qualified archeologist will be afforded the necessary time to recover, analyze, and curate the find. The qualified archeologist shall recommend the extent of archeological monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the building site while evaluation and treatment of historical or unique archaeological resources takes place.
SC-CUL-15	Archaeological Resource. All work shall stop within a 30 foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist. The qualified archaeologist shall assess the find(s) and, if it is determined to be of value, shall draft a monitoring program and oversee the remainder of the grading program. Should evidence of prehistoric or historic cultural resources be found the archaeologist shall monitor all ground-disturbing activities related to the proposed Project. Any significant archaeological resources found shall be preserved as determined necessary by the archaeologist and offered to a local museum or repository willing to accept the resource. Any resulting reports shall also be forwarded to the South Central Coastal Information Center at the California State University, Fullerton.
SC-CUL-16	Archaeological Resource. Cultural resources sensitivity training shall be conducted by a qualified archaeologist for all construction workers involved in moving soil or working near soil disturbance. This training shall review the types of archaeological resources that might be found, along with laws for the protection of resources.
SC-CUL-17	Archaeological Resource. LAUSD shall determine whether it is feasible to prepare and implement a Phase III Data Recovery/Mitigation Program. A Phase III Data Recovery/Mitigation Program would be designed by a Qualified Archaeologist to recover a statistically valid sample of the archaeological remains and to document the site to a level where the impacts can be determined to be less than significant. All documentation shall be prepared in the standard format of the ARMR Guidelines, as prepared by the OHP. Once a Phase III Data Recovery/Mitigation Program is completed, an archaeological monitor shall be present on site to oversee the grading, demolition activities, and/or initial construction activities to ensure that construction proceeds in accordance with the adopted Phase III Data Recovery/Mitigation Program. The extent of the Phase III Data Recovery/Mitigation Program and the extent and duration of the archaeological monitoring program depend on site-specific factors.

g) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Potentially Significant Impact. Historical resources are buildings, structures, objects, sites, and districts that have been formally evaluated and found to meet one or more of the significance criteria identified in CEQA Section 15064.5 (a)(3). While most historical resources will be 50 years old or older,[52] resources that have achieved significance in less than 50 years may also be considered historic, provided that a sufficient time has passed to understand their historical importance. CEQA Guidelines Section 15064.5 defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency.

Constructed between 1954 and 1955, SOCES is older than 45 years and therefore meets the age threshold for consideration as a historical resource under CEQA. A survey and evaluation of SOCES was conducted in May and June 2015.[53] As a result of the evaluation, the SOCES campus property was determined to be eligible for listing in the California Register of Historical Resources. The campus was determined eligible based on the integrity of the historic material as exemplification of an intact, low-massed, post-war, indoor-outdoor, finger-and-cluster hybrid plan school consistent with the criteria established in the District Historic

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[52] LAUSD adheres to a 45-year threshold for a potential resource to be evaluated for its eligibility as a historic resource.

[53] Sapphos Environmental, Inc. March 6, 2017. Historic Resource Evaluation Report for Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, California 91355.

Context Statement. The campus exemplifies District design ideal and principles of the era. Therefore, the property is an historical resource for the purposes of Section 15064.5(a) of the California Environmental Quality Act Guidelines. Project-related building demolition would impact historical resources; therefore, this topic will be fully analyzed in the Draft EIR.

h) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less Than Significant Impact. Archaeological resources are cultural resources of prehistoric or historic origin that reflect human activity. Archaeological resources include both structural ruins and buried resources. The term Unique Archaeological Resources is defined in PRC Section 21083.2(g) as follows:

> … 'unique archaeological resources' means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
>
> (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
>
> (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

The school site was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a large field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was constructed in the site's northwestern corner and four single-family dwellings were constructed in the site's southern portion. All of the current school, with the exception of the portable classrooms and transportation building (northwestern corner dwelling), was constructed in 1954.[54] Neither the school nor the surrounding area has been identified as having a high prehistoric or historic archaeological sensitivity.[55]

The site is underlain with native soils (late Holocene Alluvial deposits) and topped with 2 to 5 feet of artificial fill materials placed during construction of the school.[56] Excavation to a depth of approximately 5 feet for the building foundations, including over excavation of undocumented fill material, would be required.

In compliance with SC-CUL-13 and SC-CUL-15, if historical or unique archaeological resources are discovered during construction activities, all work shall stop within a 30-foot radius of the discovery. LAUSD

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[54] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

[55] City of Los Angeles. Citywide General Plan Framework Final Environmental Impact Report. Certified August 8, 2001. Chapter 2.15 - Cultural Resources. http://cityplanning.lacity.org/HousingInitiatives/HousingElement/FrameworkEIR/GPF_DraftEIR/GPF_FEIR_DEIR2.15.pdf.

[56] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

will retain a qualified archeologist to make an evaluation of significance of the resource. If it is determined to be historical or a unique archaeological resource or if the discovery is not historical or unique but the archaeologist determines the possibility of further discoveries, a monitoring program will be prepared and implemented for the remainder of the earthwork activities. Archeological impacts would be less than significant.

i) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant Impact. A paleontological resource is a natural resource characterized as faunal or floral fossilized remains, but may also include specimens of non-fossil material dating to any period preceding human occupation. The San Fernando Valley has been filled from the sides with sediments from drainages of the San Gabriel Mountains and Santa Susana Mountains to the north, the Santa Monica Mountains to the south, and the Simi Hills and Verdugo Mountains to the west and east, respectively. The school campus is on the southwest portion of the San Fernando Valley, which places it on a broad alluvial fan apron deposited at the mouths of drainages of the Santa Monica Mountains approximately two miles to the south.[57]

The Los Angeles Basin and the San Fernando Valley are rich in paleontological sites. Fossils have been found mostly in sedimentary rock that has been uplifted, eroded, or otherwise exposed. Pleistocene epoch and older alluvium in Los Angeles County has yielded locally abundant and scientifically significant fossils and has moderate to high paleontological sensitivity. However, Holocene epoch alluvium deposits are too young to contain fossils and have low paleontological sensitivity.[58] The school campus is underlain by Holocene epoch alluvium deposits.[59] Alluvium deposits exceed a depth of 51.5 feet below ground surface (maximum depth of borings). Holocene epoch deposits are not identified as soils where fossils are found.[60] Additionally, neither the school nor the surrounding area has been identified as having a high paleontological sensitivity.[61] Impacts to paleontological resources are considered less than significant.

j) Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. In the unlikely event that human remains are uncovered during project demolition, grading, or excavation, Government Code Section 27460 et seq. mandates that there shall be no further excavation or disturbance until the Los Angeles County Coroner has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner, and cause of death, and the required

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[57] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[58] Paleontological Assessment And Technical Report, Water Replenishment District, Groundwater, Reliability Improvement Program, County of Los Angeles, California http://www.wrd.org/AppendixG_PaleoAssessmt.pdf.

[59] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[60] City of Los Angeles. Citywide General Plan Framework Final Environmental Impact Report. Certified August 8, 2001. Appendix C - Vertebrate Paleontological Resources http://cityplanning.lacity.org/HousingInitiatives/HousingElement/FrameworkEIR/GPF_DraftEIR/GPF_FEIR_DEIR_AppC.pdf.

[61] City of Los Angeles. Citywide General Plan Framework Final Environmental Impact Report. Certified August 8, 2001. Chapter 2.15 - Cultural Resources. http://cityplanning.lacity.org/HousingInitiatives/HousingElement/FrameworkEIR/GPF_DraftEIR/GPF_FEIR_DEIR2.15.pdf.

recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the PRC.

Pursuant to California Health and Safety Code Section 7050.5, the coroner shall make his or her determination within two working days of notification of the discovery of the human remains. If the coroner determines that the remains are not subject to his or her authority and recognizes or has reason to believe that they are those of Native American descent, he or she shall contact the Native American Heritage Commission by telephone within 24 hours. Compliance with existing regulations would ensure that impacts to human remains would be less than significant.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potential result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-GEO-1[62]	Compliance with OEHS CEQA Specification Manual, Appendix G, Supplemental Geohazard Assessment Scope of Work. This document outlines the procedures and scope for LAUSD geohazard assessments.
SC-HWQ-1	Stormwater Technical Manual. This manual establishes design requirements and provides guidance for the cost-effective improvement of water quality in new and significantly redeveloped LAUSD school sites. These guidelines are intended to improve water quality and mitigate potential impacts to the Maximum Extent Practicable (MEP). These guidelines meet current post-construction Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and the post-construction element of the NPDES program requirements.

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[62] This project has already complied with this LAUSD standard condition; see Geotechnical Evaluation in Appendix D of this Initial Study.

SC-HWQ-2	Compliance Checklist for Storm Water Requirements at Construction Sites. This checklist has requirements for compliance with the General Construction Activity Permit and is used by OEHS to evaluate permit compliance. Requirements listed include a SWPPP; BMPs for minimizing storm water pollution to be specified in a SWPPP; and monitoring storm water discharges to ensure that sedimentation of downstream waters remains within regulatory limits

The Geologic Evaluation is included at Appendix C of this Initial Study.

a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

i. **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

Less Than Significant Impact. The proposed Project would not expose people or structures to potential substantial hazards from surface rupture of a known fault. The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazards of surface faulting and fault rupture on habitable buildings. Fault rupture generally occurs within 50 feet of an active fault line and is limited to the immediate area where the fault breaks along the surface. There are several known faults in the Los Angeles region. Active earthquake faults are faults where surface rupture has occurred within the last 11,000 years. The site is not within or immediately adjacent to (i.e., within a few hundred feet of) an Alquist-Priolo Earthquake Fault Zone. The nearest Alquist-Priolo Earthquake Fault Zone is approximately eight miles northeast of the school campus on the San Fernando Fault.[63] Based on a review of readily available geologic literature, there are no known active faults or geologically hazardous areas on or immediately adjacent to the site. Fault rupture impacts would be less than significant.

i. **Strong seismic ground shaking?**

Less Than Significant Impact. The proposed Project would not increase exposure of people or structures to earthquake impacts. Southern California is a seismically active region. Impacts from ground shaking could occur many miles from an earthquake epicenter. The potential severity of ground shaking depends on many factors, including the distance from the originating fault, the earthquake magnitude, and the nature of the earth materials beneath a given site. There are several known faults in the Los Angeles region. The closest historically active surface fault is the San Fernando Fault, which ruptured February 9, 1971, and is approximately 8 miles to the northeast of the school. The active Hollywood fault, part of the Santa Monica-Hollywood-Raymond fault system, lies approximately 11 miles southeast of the school, and the active Verdugo fault is approximately 13.5 miles east of the

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[63] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

school. Although no potentially active or active faults are known to exist within the school, the area will be subject to strong ground motion from occasional earthquakes in the region.[64]

Moderate to strong ground shaking can be anticipated. Because of the proximity to known faults, and because the entire southern California region is considered seismically active, there is a potential for people and structures to experience strong ground shaking in the future from local and regional faults.

The proposed new buildings would be designed in accordance with the "Guidelines for Evaluating and Mitigating Seismic Hazards in California"[65] and the California Geological Survey "Checklist for the Review of Geologic/Seismic Reports for California Schools, Hospitals, and Essential Services Buildings." The proposed Project also requires review from the DSA for compliance with design and construction and accessibility standards and codes. LAUSD, with oversight from DSA, would comply with these requirements in the design and construction of the new school buildings. Seismic ground shaking impacts would be less than significant.

ii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Liquefaction refers to loose, saturated sand, or gravel deposits that lose their load-supporting capability when subjected to intense shaking. Liquefaction potential varies based upon three main contributing factors: 1) cohesionless, granular soils having relatively low densities (usually of Holocene age);[66] 2) shallow groundwater (generally less than 50 feet); and 3) moderate to high seismic ground shaking.

The property sits atop late Holocene alluvial deposits.[67] Soils encountered at the school campus during testing were artificial fill material (placed as part of the school development) consisting of silty clay at the upper 2 to 5 feet. Subsurface conditions below pavement is either native soils or between 2 and 6 inches of aggregate base. From about 5 to 51.5 feet (depth of borings), the site consists of late Holocene Alluvial Fan soil, sediment deposited as a result of flowing water.[68] These alluvial deposits consist of sandy and silty clays near the surface, underlain by thickly interbedded silty and clayey sands, silty clays, clayey silts and clean sand. The soils were damp to moist above 30 feet and became moist to saturated below 30 feet. The alluvial soils varied in consistency from medium dense to dense where sandy, with the cohesive, clayey alluvial soils being medium stiff to very stiff. Groundwater was encountered at depths varying from 28 to 37 feet below ground surface. Historical high groundwater is about 10 feet below ground surface.

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[64] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[65] Published in 1997 by the California Department of Mines and Geology (DMG) as Special Publication 117 (SP117), and revised and readopted September 11, 2008 and published by the California Department of Conservation, California Geological Survey (formerly known as DMG).

[66] The Holocene epoch began 12,000 to 11,500 years ago.

[67] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[68] The Quaternary Period is the current and most recent of the three periods of the Cenozoic Era in the geologic time. The Quaternary Period is divided into two epochs: the Pleistocene (2.588 million years ago to 11.7 thousand years ago) and the Holocene (from 12,000 to 11,500 years ago to today). We are currently living in the Holocene Epoch of the Quaternary Period.

The entire southern California region is considered seismically active. Because of seismicity, soil conditions, and historic depth to groundwater, the school campus is in a zone of required investigation for liquefaction as designated by the California Geological Survey, and is shown in the Safety Element of the Los Angeles General Plan on Exhibit B as an area susceptible to liquefaction.[69]

The geotechnical investigation assessed the potential for liquefaction in subsurface site soils, the effects of liquefaction on buildings, and surface deformation or settlement due to liquefaction.[70]

According to the State of California Special Publication 117A, hazards from liquefaction should be mitigated to the extent required to reduce seismic risk to "acceptable levels." The acceptable level of risk means "that level that provides reasonable protection of the public safety" (California Code of Regulations (CCR) Title 14, Section 3721(a)). More stringent requirements are prescribed by the California Building Code (CCR Title 24) for hospitals, public schools, and essential service buildings. For such structures, the requirements of the Seismic Hazards Mapping Act are intended to complement the CCR Title 24 requirements.

The geotechnical investigation includes recommendations to minimize liquefaction hazards to people and structures, which have been incorporated into the proposed Project; including placement of suitable engineered fill or firm natural soils to a depth of five feet, proper shoring of excavations, using conventional foundation or mat foundation systems, footings, and other construction methods.[71] During project construction, the grading operations would excavate, replace, and compact site soils to at least 90 percent relative compaction. At project completion, well-compacted earth would underlie the Project. All proposed structures would comply with all applicable laws pertaining to school construction, including the California Building Code, the California Geological Survey "Guidelines for Evaluating and Mitigating Seismic Hazards in California"[72] and "Checklist for the Review of Geologic/Seismic Reports for California Schools, Hospitals, and Essential Services Buildings."[73] The DSA reviews and approves construction plans for new public school buildings. As part of the DSA review process, LAUSD is required to show how the Project complies with a final engineering-level geotechnical report. This report includes, but is not limited to: identification of building setbacks, site preparation, specific locations and methods for fill placement, temporary shoring, groundwater seismic design features, excavation stability, foundations, soil stabilization, establishment of any deep foundations, concrete slabs and pavements, surface drainage, cement type and corrosion measures, erosion control, shoring and internal bracing, and plan review.

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[69] City of Los Angeles. 1996, November 26. Safety Element of the Los Angeles City General Plan. Exhibit B: Areas Susceptible to Liquefaction. http://cityplanning.lacity.org/cwd/gnlpln/saftyelt.pdf.

[70] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[71] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[72] Published in 1997 by the California Department of Mines and Geology (DMG) as Special Publication 117 (SP117), and revised and readopted September 11, 2008 and published by the California Department of Conservation, California Geological Survey (formerly known as DMG).

[73] California Geological Survey. October 2013. http://www.conservation.ca.gov/cgs/information/publications/cgs_notes/note_48/Documents/Note_48.pdf

The Project design and development would incorporate all recommended measures outlined in the final engineering-level geotechnical report to ensure that safety is not compromised as required by existing regulations. The potential for liquefaction is therefore considered to be low and impacts would be less than significant.

iii. Landslides?

No Impact. Landsliding is a type of erosion in which masses of earth and rock move down slope as a single unit. Susceptibility of slopes to landslides and other forms of slope failure depend on several factors, which are usually present in combination and include steep slopes, condition of rock and soil materials, the presence of water, formational contacts, geologic shear zones, and seismic activity.

The school campus elevation is between 735 and 740 feet above mean sea level. The school and vicinity slope very gently to the north-northwest.[74] The school campus and its adjoining properties are relatively flat and exhibit no substantial elevation changes or unusual geographic features. The school campus is not in a zone of required investigation for earthquake-induced landslides as mapped by the California Geological Survey.[75] Therefore, the Project would not expose people or the new school buildings to adverse effects from landslides.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact.

Construction Phase

The proposed Project would not result in substantial soil erosion or loss of topsoil. The native topsoil was removed and/or compacted during development of the school campus; therefore, redevelopment of the school campus would not result in the loss of topsoil.[76] Erosion is a normal and inevitable geologic process whereby earthen materials are loosened, worn away, decomposed or dissolved, and moved from one place to another. Precipitation, running water, waves, and wind are all agents of erosion. Ordinarily, erosion proceeds imperceptibly, but when the natural equilibrium of the environment is changed, the rate of erosion can be greatly accelerated. This can create aesthetic as well as engineering problems on undeveloped sites. Accelerated erosion in an urban area can cause damage by undermining structures; blocking storm drains; and depositing silt, sand, or mud in roads and tunnels. Eroded materials can eventually be deposited in local waters, where the carried silt remains suspended in the water for some time, constituting a pollutant and altering the normal balance of plant and animal life. Project-related construction activities would expose soil through excavation, grading, and trenching, and thus could cause erosion during heavy winds or storms. Construction projects of one acre or more are regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land

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[74] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

[75] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation To Assist Design Team Schematic Development, Sherman Oaks Center For Enriched Studies, 18605 Erwin Street, Tarzana, California.

[76] Topsoil is the thin, rich layer of soil where most nutrients for plants are found and where most land-based biological activity takes place. The loss of topsoil through erosion is a major agricultural problem.

Disturbance Activities (Order No. 2012-0006-DWQ) issued by the State Water Resources Control Board. Project applicants obtain coverage by developing and implementing a Stormwater Pollution Prevention Plan (SWPPP) estimating sediment risk from construction activities to receiving waters, and specifying best management practices (BMPs) that would be incorporated into the construction plan to minimize stormwater pollution. Categories of BMPs used in SWPPPs are described in Table 7. The school campus is 21.5 acres and less than 5-acres contiguous at a time would be disturbed; thus, project construction would be subject to the Statewide General Construction Permit and implementation of BMPs specified in the SWPPP. This is also required under the SC-HWQ-2. Construction-phase soil erosion impacts would be less than significant.

Table 7 Construction BMPs

Category	Purpose	Examples
Erosion Controls and Wind Erosion Controls	Cover and/or bind soil surface, to prevent soil particles from being detached and transported by water or wind.	Mulch, geotextiles, mats, hydroseeding, earth dikes, swales.
Sediment Controls	Filter out soil particles that have been detached and transported in water.	Barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basin; cleaning measures such as street sweeping.
Tracking Controls	Minimize the tracking of soil off-site by vehicles.	Stabilized construction roadways and construction entrances/exits; entrance/outlet tire wash.
Non-Storm Water Management Controls	Prohibit discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Conduct various construction operations, including paving, grinding, and concrete curing and finishing, in ways that minimize non-stormwater discharges and contamination of any such discharges.	BMPs specifying methods for: paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; concrete curing; concrete finishing.
Waste Management and Controls (i.e., good housekeeping practices)	Management of materials and wastes to avoid contamination of stormwater.	Spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes.

Source: California Stormwater Quality Association (CASQA). 2003, January. Stormwater Best Management Practice Handbook: Construction.

Operational Phase

After completion of the proposed Project, ground surfaces at the school campus would be either hardscape or maintained landscaping, and no large areas of exposed soil would be left to erode off the campus. The proposed Project would incorporate SC-HWQ-1, which requires compliance with the Planning and Land Development Handbook for Low Impact Development (LID) Handbook issued by the City of Los Angeles Stormwater Program in May 2016.[77] The LID Handbook in turn is pursuant to the Municipal Stormwater Permit for coastal watersheds of Los Angeles County, Order No. R4-2012-0175, issued by the Los Angeles Regional Water Quality Control Board (LARWQCB) in 2012.

The LID Handbook was developed as part of the municipal stormwater program to address stormwater pollution from new developments and redevelopment projects. LID stormwater management would be

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[77] Planning and Land Development Handbook for Low Impact Development (LID). Part B, Planning Activities, 5th edition. May 9, 2016 http://www.lastormwater.org/wp-content/files_mf/lidmanualfinal.pdf

incorporated into the Project design and employs principles such as preserving and recreating natural landscape features, minimizing impervious areas to create functional and appealing site drainage that treats stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed. Applied on a broad scale, LID can maintain or restore a watershed's hydrologic and ecological functions. LAUSD would comply with existing regulations and LAUSD's applicable requirements. Operational phase soil erosion impacts would be less than significant.

c) **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

Less Than Significant Impact. Hazards arising from liquefaction and landslides would be less than significant, as discussed above in Sections VIa(iii) and (iv).

Lateral spreading. Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The geotechnical evaluation assessed the potential for lateral spreading in subsurface site soils. Foundation and building designs include lateral load measures to compensate for the spreading potential and to minimize lateral spreading hazards to people and structures. Due to the flat nature of the school and vicinity, and without adjacent sloping free faces, the potential for lateral spreading is negligible, and anticipated lateral spread is less than three inches.[78] The DSA reviews and approves construction drawings for new public schools. As part of the DSA review process, LAUSD is required to show how the Project complies with the final engineering-level geotechnical report. This report includes, but is not limited to, identification of building setbacks, site preparation, fill placement, temporary shoring, groundwater seismic design features, excavation stability, foundations, soil stabilization, establishment of deep foundations, concrete slabs and pavements, surface drainage, cement type and corrosion measures, erosion control, shoring and internal bracing, and plan review.

The Project design and development would incorporate all recommended measures outlined in the final geotechnical report to ensure that safety is not compromised, as required by existing regulations. Compliance with existing building codes and DSA requirements would ensure that the buildings are designed and constructed for this condition. The proposed Project would not expose people or the new school buildings to significant adverse effects associated with lateral spreading. Impacts would be less than significant.

Subsidence and Seismically Induced Settlement. The major cause of ground subsidence is withdrawal of groundwater. The proposed Project would not withdraw groundwater and no large-scale extraction of groundwater, gas, oil, or geothermal energy is occurring or planned at the site or in the general site vicinity. Appendix C of the geotechnical evaluation is the analyses for seismically induced settlement conducted for the proposed Project. The site is considered suitable, from a geotechnical engineering standpoint, for the

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[78] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.

proposed Project.[79] Additionally, the Project design and development would incorporate all recommended measures outlined in the final engineering-level geotechnical report to ensure that safety is not compromised, as required by existing regulations. Compliance with existing building codes and DSA would ensure that the buildings are designed and constructed for this condition. The proposed Project would not expose people or the new school buildings to significant adverse effects associated with subsidence and seismically induced settlement. Impacts would be less than significant.

Collapsible Soils. Collapsible soils are typically geologically young, unconsolidated sediments of low density that may compress under the weight of structures. Based on testing performed on site soils, the native alluvium is not considered collapsible. Based on consolidation testing of the underlying soils, the potential for hydro-collapse of the underlying soils to a depth of 50 feet below the existing ground surface is low.[80] Project development would not cause hazards from collapsible soils, and impacts would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansive soils possess clay particles that react to moisture changes by shrinking when dry or swelling when wet. These soils have the potential to crack building foundations and, in some cases, structurally distress the buildings themselves. Minor to severe damage to overlying structures is possible. Based on field exploration, soil classification, and density results, onsite soils are considered to have medium expansion potential.[81] Special recommendations for foundation design will be incorporated into the design of buildings. The DSA would ensure that the buildings are designed and constructed for this condition. The proposed Project would not expose people or the new school buildings to significant adverse effects associated with expansive soils. Impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The existing school does not use septic tanks or other alternative wastewater disposal systems, and no impact would occur.

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[79] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.
[80] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.
[81] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-USS-1	*School Design Guide. (Book Two General Criteria, Section 2.4. C.2.f.1)* Construction and demolition waste shall be recycled to the maximum extent feasible. LAUSD has established a minimum non-hazardous construction and demolition debris recycling requirement of 75% by weight as defined in Specification 01340, Construction & Demolition Waste Management. Guide Specifications Division 01 - Section 7419, Construction & Demolition Waste Management, October 11, 2011. This section of the LAUSD Specifications includes procedures for preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in landfills. Requires the collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the C&D waste generated.
SC-GHG-1	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping, and tanks to minimize water loss.
SC-GHG-2	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.
SC-GHG-3	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.
SC-GHG-4	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.
SC-GHG-5	LAUSD shall ensure that the time dependent valued energy of the proposed Project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the project is submitted to the Division of the State Architect.
Note: Text in *italics* shows specific requirement identified in the criteria or condition.	

GHG regulatory setting and modeling data can be found in Appendix A to this Initial Study.

The Intergovernmental Panel on Climate Change (IPCC) has identified four major greenhouse gases (GHGs)—water vapor, carbon dioxide (CO_2), methane, and O_3—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. The primary source of these GHGs is fossil fuel use. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide, sulfur hexafluoride, hydro fluorocarbons, perfluorocarbons, and chlorofluorocarbons (CFCs).[82]

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough GHG emissions on its own to influence global climate change significantly; hence, the issue of global climate change is, by definition, a cumulative environmental impact.

A typical school project could generate GHG emissions from construction activities, energy use (directly through fuel consumed for building heating), area sources (e.g., consumer products, coatings), mobile sources (e.g., vehicle trips associated with the new students), water usage, and solid waste generation. However, similar to the operation-phase criteria air pollutants (discussed in Section III[b]), it is anticipated that the net change in operation-phase GHG emissions associated with the proposed Project would be nominal because the number of students would remain the same and the newer buildings would be more energy efficient. The new buildings would be designed and constructed to comply with and/or exceed Title 24 Building Energy Efficiency Standards as outlined in CHPS EE 1.0, EE 2.0, EE 3.0, and EE 5.0 and LAUSD Standard Condition SC-GHG-5. Consistent with CHPS OM 3.0, the school will track its energy use over time to analyze energy performance of the facility. Also, as outlined in CHPS WE 1.0, WE 2.0, and WE 3.0 and SC-GHG-1, SC-GHG-2, SC-GHG-3, and SC-GHG-4, the proposed Project would be designed to reduce potable water use, wastewater generation, and outdoor water use. Thus, for the purpose of this analysis, only construction-related GHG emissions are quantified. Table 8 provides both the total and amortized project-related construction emissions. The amortized emission rate is based on total construction emissions amortized over 30 years per SCAQMD methodology.[83] Amortized construction emissions would be substantially below the proposed SCAQMD bright-line threshold of 3,000 metric tons of CO_2equivalent per year. Furthermore, implementation of SC-USS-1, which requires construction waste recycling, would contribute to further minimizing construction-related GHG emissions. It is anticipated that operation-phase GHG emissions would be nominal and would not cause an exceedance of the SCAQMD bright-line threshold. Therefore, the proposed Project's cumulative contribution to GHG emissions is less than significant.

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[82] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

[83] South Coast Air Quality Management District. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

Table 8 Project-Related Construction GHG Emissions

Source	GHG (metric tons)
Total Construction Emissions[1]	1,870 $MTCO_2e$
Amortized Construction Emissions[2]	62 $MTCO_2e$/yr
Proposed SCAQMD Bright-Line Threshold	3,000 $MTCO_2e$/yr
Exceeds Bright-Line Threshold	No

Source: CalEEMod, Version 2016.3.1. Totals may not equal to the sum of the values as shown due to rounding
Notes: $MTCO_2e$: metric ton of carbon dioxide equivalent
[1] Implementation of SC-USS-1, which focuses on construction waste recycling, would contribute in further minimizing construction-related GHG emissions.
[2] Total construction emissions are amortized over 30 years per SCAQMD methodology.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The California Air Resources Board's (CARB's) Scoping Plan is California's GHG reduction strategy to achieve the state's GHG emissions reduction target. In accordance with AB 32, CARB developed the 2008 Scoping Plan to outline the state's strategy to achieve 1990 level emissions by year 2020. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts. On January 20, 2017, CARB released the 2017 Climate Change Scoping Plan to address the new interim GHG emissions target under Senate Bill 32 (SB 32), which requires the state to reduce its GHG emissions 40 percent below 1990 levels by 2030.[84] The 2017 Climate Change Scoping Plan provides strategies to meet this target. Adoption hearings are planned for sometime in 2017.

Statewide strategies to reduce GHG emissions in the 2017 Scoping Plan include implementing SB 350, which expands the Renewables Portfolio Standard to 50 percent by 2030 and doubles energy efficiency savings; expanding the Low Carbon Fuel Standard to 18 percent by 2030; implementing the Mobile Source Strategy to deploy zero-emission electric vehicle buses and trucks; implementing the Sustainable Freight Action Plan; implementing the Short-Lived Climate Pollutant Reduction Strategy, which reduces methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and black carbon emissions 50 percent below 2013 levels by 2030; continuing to implement SB 375; creating a post-2020 Cap-and-Trade Program; establishing a new regulation to reduce GHG emissions from the refinery sector by 20 percent; and developing an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.[85]

New buildings, like those constructed as a part of the proposed Project, are required to comply with the 2016 Building Energy Efficiency Standards and 2016 CALGreen Building Standards Code. Additionally, the proposed new school building facilities would be designed and constructed to meet the CHPS criteria and LAUSD Standard Conditions of Approval. With implementation of these regulations and standards, the

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[84] California Air Resources Board. 2017, January 20. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

[85] California Air Resources Board. 2017, January 20. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

proposed Project's GHG emissions would exceed the reductions that would be achieved through statewide measures.

In addition to AB 32, the California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. For the SCAG region, the Regional Transportation Plan (RTP)/SCS was adopted in April 2016.[86] The proposed Project would result in improvements to an existing school only and would not result in an increase to the number of students or vehicle trips. Therefore, the proposed Project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS, and the impacts would be less than significant.

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[86] Southern California Association of Governments (SCAG). 2016, April. The 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): A Plan for Mobility, Accessibility, Sustainability, and a High Quality of Life. http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for the people residing or working in the project area?	☐	☐	☐	☒
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Explanation:

This section is based, in part, on the Phase I Environmental Site Assessment that was completed on July 21, 2016.[87] The Phase I Environmental Site Assessment (ESA) is included as Appendix D of this Initial Study.

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Less Than Significant Impact.

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[87] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

Hazardous Materials That Would Be Used on Campus

Construction

Construction may involve activities requiring the transport, storage, use, or disposal of small quantities of hazardous substances for activities such as fueling and servicing construction equipment and applying paints and other coatings. The use of these materials during project construction would be short-term in nature and would occur in accordance with standard construction practices, as well as with applicable federal, state, and local regulations. Potentially hazardous materials would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations.

Existing Hazardous Materials Present or Potentially Present on or near the Campus

Recognized Environmental Conditions

A recognized environmental condition (REC) is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property due to any release to the environment, under any conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.[88]

Recognized environmental conditions were not identified within the campus during this assessment. Historical RECs were also not identified at the campus. Historical RECs refer to a past release that has been remediated to below "residential" standards and given regulatory closure with no use restrictions.

Other Environmental Conditions (OECs) were identified within the campus during the assessment. OECs are features or issues that, while being judged to have a relatively low probability of resulting in significant impact, should be considered in project planning and risk management. The OECs on campus include lead-based paint, pesticides, arsenic-based herbicides, electrical transformers, flammable materials storage room, paint and/or solvent spray booth.

- **Lead.** Due to the age of the buildings, it is considered likely that the paint on the buildings contains, or formerly contained, elevated lead concentrations. Due to its slow deterioration with time, elevated lead concentrations are anticipated in the soil adjoining older buildings. Note that the buildings have been mostly bordered by pavement since 1954. As such, the potential that the soils underlying this pavement have been impacted with lead is considered relatively low. Elevated lead concentrations, however, are anticipated in soils within the planters that contain trees between the buildings, or any other unpaved areas adjoining the buildings.

  Although the former dwellings were less than 7 years old when they were removed, there is a potential that leaded paint dust and fragments were generated during their demolition around 1954. These former dwellings were located adjacent to the auditorium and Classroom Buildings D, E, and H.

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[88] ASTM International (ASTM). 2013. Standard E1527-13: Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

- **Arsenic.** There is a potential that elevated arsenic concentrations (greater than background levels) are present in the soils immediately underlying the paved portions of the school. It was formerly common practice to apply an arsenic-based herbicide to soil immediately prior to paving with asphalt.

- **Pesticides.** As noted above, the school was in periodic agricultural use (fields) in the 1930s and 1940s. As such, it is considered possible that persistent pesticides were formerly used, and may have impacted the surficial soils. Due to the lack of orchards and row crops, which are relatively heavy users of pesticides, elevated pesticide concentrations (greater than regulatory levels) are not anticipated.

- **Gasoline and Diesel.** Two 55-gallon drums of gasoline and one 55-gallon drum of diesel were observed in a flammable materials storage room on the eastern side of the Utility Building. Indications of releases from these fuel containers were not evident at the time of the assessment. A drain hole located in the southern portion of this room would have drained the fuel from the floor of this room in the event of a significant release.[89]

Demolition of the school buildings would require routine transport and disposal of hazardous demolition waste material and soil off the school campus.

Polychlorinated Biphenyls

PCBs were once used as coolants, insulating materials and lubricants in electrical materials, such as transformers. PCBs were also used widely in caulking and elastic sealant materials, particularly from 1950 through the 1970's until PCBs were banned in 1979. There are nine electric transformers on the campus.[90] Due to the age of most of these transformers, it is possible they contain PCBs. Additionally, PCBs may exist in soil near exterior caulking in buildings meeting the age criteria and adjacent unpaved areas. If PCBs are identified during preparation of the Preliminary Environmental Assessment (PEA), LAUSD Section 13614 (*Abatement of Hazardous Materials*) will be implemented for the removal of PCBs, in compliance with applicable health and safety and hazardous materials regulations.

Asbestos

Asbestos is the name of a group of silicate minerals that are heat resistant, and thus were commonly used as insulation and fire retardant. Inhaling asbestos fibers has been shown to cause lung disease (asbestosis) and lung cancer (mesothelioma).[91] Beginning in the early 1970s, a series of bans on the use of certain asbestos-containing materials (ACMs) in construction were established by the EPA and the Consumer Product Safety

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[89] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

[90] Eco and Associates, Inc. July 21, 2016. Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900.

[91] Department of Toxic Substances Control (DTSC). 2017, March 16. Glossary of Environmental Terms. http://www.dtsc.ca.gov/InformationResources/Glossary_of_Environmental_Terms.cfm.

Commission. Most US manufacturers voluntarily discontinued the use of asbestos in certain building products during the 1980s.[92]

Buildings must be reviewed by LAUSD's Facilities Environmental Technical Unit (FETU) for asbestos prior to Project commencement.[93] Because the school was constructed in 1954 it is anticipated that the buildings contain asbestos. During demolition and renovation of permanent buildings and removal of portable buildings, asbestos would be removed, contained, and disposed. Requirements for limiting asbestos emissions from building demolition and renovation activities are specified in SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities). California Government Code Sections 1529 and 1532.1 provide for exposure limits, exposure monitoring, respiratory protection and good working practice by workers exposed to lead and ACM. In addition, LAUSD Section 13614 (Abatement of Hazardous Materials) will be implemented for the removal of ACM and asbestos-containing construction material (ACCM), in compliance with applicable health and safety and hazardous materials regulations. The proposed Project would not subject people to substantial hazards from ACM or ACCM, and impacts would be less than significant.

Lead-Based Paint

Lead was formerly used as an ingredient in paint (before 1978) and as a gasoline additive; both of these uses have been banned. Lead is listed as a reproductive toxin and a cancer-causing substance; it also impairs the development of the nervous system and blood cells in children.[94] Lead-based paint is defined in Code of Federal Regulations Title 40 Part 745 as paint or other surface coatings that contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight. Pre-1978 structures are presumed to contain lead-based paint without having an inspection. The school was constructed in 1954.

Due to the ages of the buildings onsite, all coated surfaces (paint, varnish, or glazed) are assumed to contain lead; therefore, must be reviewed by LAUSD's FETU for lead-based paint prior to Project commencement.[95] All lead-containing material abatement/removal work must comply with the US Environmental Protection Agency (EPA), US Occupational Safety and Health Administration, and SCAQMD regulations. Lead must be contained during demolition activities (California Health & Safety Code sections 17920.10 and 105255). Title 29 Code of Federal Regulations (CFR) Part 1926 establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation or monitoring. In addition, LAUSD Section 13282 (Lead Abatement and Lead Related Construction Work) and LAUSD Section 13614 (Abatement of Hazardous Materials) will also be implemented for the removal of lead-based paint and building materials, in compliance with applicable health and safety and hazardous materials regulations. The proposed Project would not subject people to substantial hazards from lead-based paint, and impacts would be less than significant.

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[92] US Environmental Protection Agency (USEPA). December 19, 2016. U.S. Federal Bans on Asbestos. https://www.epa.gov/asbestos/us-federal-bans-asbestos.

[93] FETU is responsible for hazardous material abatement and management and for State and Federal regulatory compliance.

[94] Department of Toxic Substances Control (DTSC). 2017, March 16. Glossary of Environmental Terms. http://www.dtsc.ca.gov/InformationResources/Glossary_of_Environmental_Terms.cfm.

[95] FETU is responsible for hazardous material abatement and management and for State and Federal regulatory compliance.

Pesticides

Due to the ages of the buildings, organochlorine pesticides may have been used in the buildings for termite control, and could also be present in the southeast corner of the site that was in residential use until the 1920's.[96] Arsenic is used as a pesticide, primarily to preserve wood from rot and decay; and was also previously used in rat poisons, ant poisons and weed killers.[97] Arsenic may have been historically used at the campus.

The District is currently preparing a PEA that includes sampling and testing soils for organochlorine termiticides and arsenic, and will remove any positive results found in demolition locations. The proposed Project would not subject people to substantial hazards from pesticides, and impacts would be less than significant.

Soil Import and Export

Any soil that is imported or exported must be chemically tested in accordance with specific written procedures as outlined in LAUSD Specifications, Section 01 4524, *Environmental Import/Export Materials Testing*.[98] This section specifies the requirements for the sampling, testing, transportation, and certification of imported fill materials or exported fill materials from school sites.

Existing Hazardous Substances Used

Hazardous materials that are currently being handled, used, transported, or disposed of include: standard cleaning products; pesticides and herbicides; and paints, fuels, and lubricants used in association with existing campus janitorial, maintenance, and landscaping. In addition, certain curricula, such as chemistry and industrial arts (wood, metal, electronics), currently involve the use of small quantities of chemicals, fuels and other petroleum products, solvents, and paints. Small volumes of hazardous wastes, such as waste paint, batteries, fluorescent lamps, mercury-containing equipment, or unused maintenance products would require management in accordance with standard LAUSD policies and practices. Most hazardous materials stored on campus present little risk of upset, since they are generally stored in small containers (30 gallons or less) in designated areas. The amounts of hazardous materials that are handled at any one time are likewise small, reducing the potential consequences of an accident during transport, storage, or handling.

Hazardous materials are regulated by several agencies, including the EPA, the California Department of Toxic Substances Control, California Division of Occupational Safety and Health, and the Los Angeles Fire Department.[99] The requirements of these agencies would be incorporated into the design and operation of

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[96] Organochlorine termiticides previously used in the United States include lindane, aldrin, dieldrin, DDT (dichlorodiphenyltrichloroethane), chlordane, and heptachlor; none of those pesticides are still used as termiticides in the United States. Grace, et al. 1993. Persistence of Organochlorine Pesticides for Formosan Subterranean Termite (*Isoptera: Rhinotermitidae*) Control in Hawaii. In *Journal of Economic Entomology*, Vol. 86, No. 3. http://manoa.hawaii.edu/ctahr/termite/aboutcontact/grace/pdfs/068.pdf.

[97] National Pesticide Information Center, Oregon State University. 2015, December 18. Arsenic. http://npic.orst.edu/ingred/ptype/treatwood/arsenic.html.

[98] LAUSD Asset Management, Guide Specifications: Division 01 General Requirements, Section 01 4524, Environmental Import/Export Materials Testing. October 1, 2011.

[99] The Los Angeles Fire Department is the Certified Unified Program Agency (CUPA) for the City of Los Angeles; the Certified Unified Program coordinates and makes consistent enforcement of several state and federal regulations governing hazardous materials.

the proposed Project. These requirements include providing for and maintaining appropriate storage areas for hazardous materials and installing or affixing appropriate warning signs and labels. All materials and substances that would be used after Project completion are already being used on the campus; therefore, no change would occur. Hazards to the public, the students, or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant.

Construction contractors are required to comply with LAUSD standard specifications for proper packaging, transportation, and disposal of any discovered hazardous materials before building construction starts. Specifically, construction contractors are required to comply with worker training, health and safety, hazardous material containment, and off-site transport and disposal of contaminated soil. The proposed Project would not subject people or the environment to substantial hazards related to hazardous materials onsite or potentially onsite, and impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less Than Significant Impact. The use, handling, storage, and disposal of hazardous materials in the course of Project construction and operation would not pose a substantial hazard to the public or the environment from reasonably foreseeable accidental release. Compliance with the previously discussed regulations is already standard practice at the school, including training school staff to safely contain and clean up hazardous materials spills; maintenance of hazardous materials spill containment and cleanup supplies onsite; implementing school evacuation procedures as needed; and contacting the appropriate hazardous materials emergency response agency immediately pursuant to requirements of regulatory agencies. Impacts from reasonably foreseeable upset and accident conditions would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact. The proposed Project would not emit hazardous emissions or handle significant quantities of hazardous or acutely hazardous materials, substances, or waste. The proposed Project would not emit hazardous emissions or handle significant quantities of hazardous or acutely hazardous materials, substances, or waste. Hazardous materials expected at the existing school would be associated with janitorial, maintenance, and repair activities. These materials would be used in small quantities and would be stored in compliance with established state and federal requirements. Additionally, construction materials and site cleanup would comply with existing regulations. Operation of construction equipment and heavy trucks during Project construction would generate diesel emissions, which are considered hazardous; however, the Project construction period would be temporary. Health risk is based upon the conservative assumption that exposure is continuous and occurs over a 70-year lifetime. A determination of risk is not appropriate for short-term construction activities. Exposure to diesel exhaust during the construction period would not pose substantial hazards to persons at any of the schools within 0.25 mile of the Project site. Impacts would be less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant Impact. California Government Code Section 65962.5 requires that lists of hazardous materials sites be compiled and available to the public. These lists include:

- hazardous waste facilities subject to corrective action
- hazardous waste discharges for which the SWRCB has issued certain types of orders
- public drinking water wells containing detectable levels of organic contaminants
- underground storage tanks with reported unauthorized releases
- solid waste disposal facilities from which hazardous waste has migrated

The Phase I ESA for the proposed Project included a regulatory agency environmental database search; findings are discussed above in Section VIIIa. Impacts would be less than significant.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The nearest airport to the school is the Van Nuys Airport, approximately three miles northeast of the school.[100] The school campus is not within the airport influence area or the airport land use planning area of the Van Nuys Airport. Project development would not result in a new use that would interfere with air traffic patterns, or increase traffic levels or change traffic locations such that it would result in a safety risk. No impact would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. There are no private airstrips within three miles of the school campus.[101] While there may be private heliports in the vicinity, the two-story buildings proposed on the campus would not cause hazards to people on the campus from helicopters approaching or departing a heliport. The new buildings would not create a safety hazard. No impact would occur.

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[100] Caltrans. 2016, March. 2016 California Public Use Airports and Federal Airfields. http://dot.ca.gov/hq/planning/aeronaut/documents/maps/PublicUseAirports_MilitaryAirfieldsMap.pdf.

[101] Airnav.com. January 24, 2017, Airport Information. http://www.airnav.com/airports/.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The City of Los Angeles Emergency Management Department is responsible for planning for emergency response, recovery, and mitigation in the city. Project construction and operation would not obstruct roadways or otherwise impair emergency access to surrounding communities. All construction staging would be on-campus. During construction, emergency response procedures would comply with the District's emergency response protocol and the contractor's emergency response plan, as required by the City's Emergency Management Department.

Emergency preparedness and response planning and coordination would be coordinated through LAUSD's Office of Emergency Services. The existing school currently has an emergency school evacuation plan in compliance with District "safe school plans." Replacement of existing buildings on the campus would not interfere with any other existing emergency response plans or emergency evacuation plans. No emergency response impact would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The school campus is in a built-out urban area, and there is no wildland susceptible to wildfire on or near the site. The nearest Very High Fire Hazard Severity Zone to the site mapped by the California Department of Forestry and Fire Prevention is over five miles south in the Santa Monica Mountains.[102] Project development would not place people or structures at risk from wildfire; no impact would occur.

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[102] California Department of Forestry and Fire Prevention (CAL FIRE). 2011, September. Very High Fire Hazard Severity Zones in LRA: Los Angeles. http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/los_angeles/Los_Angeles.pdf.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project result in:				
a. Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b. Substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned land uses for which permits have been granted)?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-HWQ-1	Stormwater Technical Manual. This manual establishes design requirements and provides guidance for the cost-effective improvement of water quality in new and significantly redeveloped LAUSD school sites. These guidelines are intended to improve water quality and mitigate potential impacts to the Maximum Extent Practicable (MEP). These guidelines meet current post-construction Standard Urban Stormwater Mitigation Plan (SUSMP) requirements, and the post-construction element of the NPDES program requirements.
SC-HWQ-2	Compliance Checklist for Storm Water Requirements at Construction Sites. This checklist has requirements for compliance with the General Construction Activity Permit and is used by OEHS to evaluate permit compliance. Requirements listed include a Storm Water Pollution Prevention Plan (SWPPP); BMPs for minimizing storm water pollution to be specified in a SWPPP; and monitoring storm water discharges to ensure that sedimentation of downstream waters remains within regulatory limits
SC-HWQ-3	Ongoing maintenance and repair. • Environmental Training Curriculum • Hazardous Waste Management Program • Medical Waste Management Program • Environmental Compliance Inspections • Safe School Inspections • Integrated Pest Management Program • Fats Oil and Grease Management Program • Solid Waste Management Program

a) Violate any water quality standards or waste discharge requirements?

Less Than Significant Impact. A significant impact would occur if the proposed Project discharges water that does not meet the quality standards of agencies which regulate surface water quality and water discharge into stormwater drainage systems. A significant impact would also occur if the proposed Project does not comply with all applicable regulations with regard to surface water quality as governed by the State Water Resources Control Board (SWRCB).

New construction projects can result in two types of water quality impacts: (1) short-term impacts from discharge of soil through erosion, sediments, and other pollutants during construction and (2) long-term impacts from impervious surfaces (buildings, roads, parking lots, and walkways) that prevent water from being absorbed/soaking into the ground, thereby increasing the pollutants in stormwater runoff. Impervious surfaces can increase the concentration of pollutants, such as oil, fertilizers, pesticides, trash, soil, and animal waste, in stormwater runoff. Runoff from short-term construction and long-term operation can flow directly into lakes, local streams, channels, and storm drains and eventually be released untreated into the ocean.

The proposed Project would be constructed in an area that is already developed and already producing nonpoint-source pollutants. Currently, stormwater is collected by engineered storm drains and directed ultimately to the Los Angeles River, approximately 0.25 mile north of the school, which flows east and south and discharges into the Pacific Ocean at Long Beach.

Construction Phase

Construction projects of one acre or more are regulated under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2012-0006-DWQ) issued by the SWRCB. Project applicants obtain coverage by developing and implementing a SWPPP, estimating pollutants from construction activities to receiving waters, and specifying BMPs that would be incorporated into the construction plan to minimize stormwater pollution. Categories of BMPs used in SWPPPs are described in Table 7. The school campus is 21.5 acres; however, because of active school operation, less than 5 acres (contiguous) in each location on campus would be disturbed at any one time. The Project construction would be subject to the Statewide General Construction Permit and implementation of BMPs specified in the SWPPP. This requirement is also required under SC-HWQ-2. Additionally, LAUSD will incorporate CHPS criteria SS 4.0 – Construction Site Runoff Control / Sedimentation to reduce erosion. Construction phase soil erosion impacts would be less than significant.

Operation Phase

After completion of the proposed Project, ground surfaces at the site would be either hardscape or maintained landscaping, and no large areas of exposed soil would be left to erode off the campus. The Project would incorporate SC-HWQ-1, which requires compliance with the LID Handbook issued by the City of Los Angeles. The LID Handbook was developed as part of the municipal stormwater program to address stormwater pollution from new developments and redevelopment projects.[103] LID stormwater management would be incorporated into the Project design. LID principles are described further in Section VI, *Geology and Soils*, of this Initial Study. LAUSD would comply with existing regulations and Standard Condition of Approval SC-HWQ-1. Operational phase soil erosion impacts would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. The school campus is within the Upper Los Angeles River Groundwater Basin. The Los Angeles Department of Water and Power supplies water to the school campus and the surrounding community. The Project does not propose groundwater wells that would extract groundwater from the aquifer. Construction and operation of the school improvements would not lower the groundwater table or deplete groundwater supplies. The 21.5-acre school does not provide groundwater recharge; therefore, the Project would not interfere with groundwater recharge. Impacts would be less than significant.

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[103] City of Los Angeles. LA Stormwater. Standard Urban Stormwater Mitigation Plan. http://www.lastormwater.org/green-la/standard-urban-stormwater-mitigation-plan/.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.

Less than Significant Impact. There are no streams or rivers on the campus. There are municipal storm drains in two streets around the school: several inlets along Erwin Street drain storm and irrigation water along a 39-inch reinforced concrete pipe east to Reseda Boulevard, then north through a 102-inch reinforced concrete box to the Los Angeles River (a reinforced concrete channel).[104] The Los Angeles River flows about 45 miles east and south before discharging into the Pacific Ocean at Long Beach. The proposed Project would not change the drainage pattern of the school campus or its surroundings.

During construction, erosion and siltation from the disturbed areas may occur. Construction-related activities that expose soils to rainfall/runoff and wind are primarily responsible for erosion. Such activities include removal of vegetation, grading, and trenching. Unless adequate erosion controls are installed and maintained during construction, significant quantities of sediment may enter storm drains. Project construction would be subject to the Statewide Construction General Permit and implementation of BMPs specified in the SWPPP. This requirement is also required under SC-HWQ-2 (Compliance Checklist for Storm Water Requirements at Construction Sites). These requirements include provisions for erosion control to ensure soils do not migrate off campus. Impacts would be less than significant.

Upon Project completion, drainage from the school would continue to be captured on campus or conveyed to the Los Angeles River via the same storm drains as existing conditions. The entire school campus would discharge less stormwater because of LID requirements. The City of Los Angeles (based on the County) has prepared the Low Impact Development Standards Manual (LID Standards Manual) to comply with the requirements of the NPDES Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4- 2012-0175). LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. There are many practices that have been used to adhere to these principles such as bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements. By implementing LID principles and practices, water can be managed in a way that reduces the impact of built areas and promotes the natural movement of water within an ecosystem or watershed by retaining stormwater on site. Thus, Project development would not cause substantial erosion. Impacts would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

No Impact. The drainage pattern following construction would be similar to existing conditions, as described above in item (c). Pursuant to LID Standards, the proposed campus drainage system would

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[104] Los Angeles County Department of Public Works (LACDPW). 2017, January 24. Los Angeles County Storm Drain System. http://dpw.lacounty.gov/fcd/stormdrain/index.cfm.

discharge a net decrease in runoff to municipal storm drains. Thus, Project development would not result in substantial flooding on- or off-site, and no impacts would occur.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. Project development would not result in runoff exceeding the capacity of the municipal storm drain system, as discussed under item (c). Development of the proposed Project would not cause substantial water pollution, as substantiated above in items (a) and (c). Runoff water impacts would be less than significant.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. A significant impact would occur if the proposed Project would substantially degrade water quality. The proposed Project would be required to comply with applicable federal, state, and local regulations, as well as obtain necessary permits from the LARWQCB. Therefore, the Project would not otherwise degrade water quality; impacts would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. The proposed Project would not develop housing. No impact would occur.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. The school campus is outside of 100-year flood zones mapped by the Federal Emergency Management Agency,[105] and therefore the Project buildings would not impede or redirect flood flows. No impact would occur.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The school campus is not in a Federal Emergency Management Agency–mapped flood hazard zone or a dam inundation zone.[106] No impact would occur.

j) Inundation by seiche, tsunami, or mudflow?

No Impact.

Seiche. A seiche is an oscillating surface wave in a restricted or enclosed body of water, generated by ground motion, usually during an earthquake. Seiches are of concern for water storage facilities, because inundation from a seiche can occur if the wave overflows a containment wall, such as the wall of a reservoir, water storage tank, dam, or other artificial body of water. As there are no large bodies of water on, or

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[105] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.

[106] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.

topographically upgrade in the immediate vicinity of the school, a seiche is not considered a potential hazard. No impact would occur.

Tsunami. Tsunamis are a type of earthquake-induced flooding produced by large-scale sudden disturbances of the sea floor. Tsunami waves interact with the shallow sea floor when approaching a landmass, resulting in an increase in wave height and a destructive wave surge into low-lying coastal areas. The school campus is at an elevation of about 740 feet above mean sea level and is about 10 miles inland from the Pacific Ocean. The school campus is outside the tsunami hazard zone and is not anticipated to be inundated by a tsunami.[107] No impacts would occur.

Mudflow. A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. There are no slopes on or next to the school campus that could generate a mudflow, and no impact would occur.

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[107] Gorian and Associates, Inc. October 21, 2016. Geotechnical Evaluation.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Explanation:

a) Physically divide an established community?

No Impact. The school campus and surrounding land is fully developed with urban land uses, including residential and commercial. The proposed Project would take place within the school campus boundaries and would not divide an established community. No impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The school campus is in the Reseda-West Van Nuys Community Plan Area, one of 35 community plan areas identified in the Los Angeles General Plan.

The zoning designation for the school property is [Q]PF-1XL-RIO.[108] PF (Public Facilities) is the designation for the use and development of publicly owned land, including public elementary and secondary schools. [Q] means additional restrictions on building design, landscape buffer, signs, etc.; '1' is Height District No. 1; and 'XL' is Extra Limited Height District where no building or structure shall exceed two stories, nor shall the highest point of the roof of any building or structure exceed 30 feet in height.[109]

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[108] City of Los Angeles, Department of City Planning. Parcel Profile Report for 18605 Erwin Street in Reseda (APN 2127-012-900). zimas.lacity.org, planning.lacity.org.

[109] City of Los Angeles Municipal Code, Section 12.21.1. Height of Building or Structures. http://library.amlegal.com/nxt/gateway.dll/California/lapz/municipalcodechapteriplanningandzoningco/chapterigeneralprovisionsandzoning/article2specificplanning-zoningcomprehen/sec12176m1limitedindustrialzone?f=templates$fn=default.htm$3.0$vid=amlegal:lapz_ca$anc.

'RIO' designates that the property is within the River Improvement Overlay District that was established for areas around the Los Angeles River.[110] The purpose of a River Improvement Overlay District is to:

1) Support the goals of the Los Angeles River Revitalization Master Plan;
2) Contribute to the environmental and ecological health of the City's watersheds;
3) Establish a positive interface between river adjacent property and river parks and/or greenways;
4) Promote pedestrian, bicycle and other multi-modal connection between the river and its surrounding neighborhoods;
5) Provide native habitat and support local species;
6) Provide an aesthetically pleasing environment for pedestrians and bicyclists accessing the river area;
7) Provide safe, convenient access to and circulation along the river;
8) Promote the river identity of river adjacent communities; and
9) Support the Low Impact Development Ordinance, the City's Irrigation Guidelines, and the Standard Urban Stormwater Maintenance Program.

The Los Angeles River is located approximately 0.25 mile to the north. The on-campus improvements would not have any effect on the River Improvement Overlay District or the Los Angeles River Revitalization Master Plan. All Project-related construction would take place on campus and would not be seen from the Los Angeles River. The General Plan Land Use designation is Public Facilities.[111] The school campus is also within the Reseda-West Van Nuys Community Plan Area and the Tarzana Neighborhood Council District.[112]

All new buildings on the school campus would be a maximum of 2-stories. Additionally, the school is an existing facility and does not impede the goals or purpose of the River Improvement Overlay District. New construction within the campus would not affect zoning or general plan land use designations.

Development of the proposed Project would not conflict with existing plans, policies, or regulations adopted for the purpose of avoiding, or mitigating, environmental effects. No impact would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The school campus is completely developed and located in an urbanized area; it is not in a habitat conservation plan or natural community conservation plan. No impact would occur.

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[110] Zoning Information (Z.I) No. 2358 River Improvement Overlay District. Ordinance Nos. 183144 and 183145. Effective August 20, 2014. Revised January 12, 2015. http://zimas.lacity.org/documents/zoneinfo/ZI2358.pdf.

[111] Reseda-West Van Nuys Community Plan Area. http://planning.lacity.org/complan/valley/respage.htm

[112] City of Los Angeles, Department of City Planning. Parcel Profile Report for 18605 Erwin Street in Reseda (APN 2127-012-900). zimas.lacity.org | planning.lacity.org.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

Explanation:

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

No Impact. The school campus is mapped Mineral Resource Zone 1 by the California Geological Survey, indicating that it is in an area where significant mineral deposits are known to be absent, or where there is considered to be little likelihood for the presence of such deposits.[113] No active mines are mapped in the western Los Angeles Basin.[114] There are no oil fields near the school campus. The closest active gas and oil production well is approximately two miles south (south of El Caballero Country Club) and operated by Golden Gate Oil Company.[115] The school campus is fully developed and is not available for mining. Therefore, development of the proposed Project would not cause a loss of availability of a known mineral resource valuable to the region and the state, and no impact would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. One available aggregate deposit site is identified in the City of Los Angeles General Plan, the Tujunga Alluvial Fan in the Lake View Terrace–Sun Valley area, which is approximately 10 miles northeast of the school campus.[116] Therefore, development of the proposed Project would not cause a loss of availability of a mining site, and no impact would occur.

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[113] California Geological Survey (CGS). 1994a. Generalized Mineral Land Classification Map of Los Angeles County: South Half. Open File Report 94-14, Plate 1B. ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_94-14/OFR_94-14_Plate1B.pdf.

[114] Office of Mine Reclamation (OMR). 2016, February 1. Mines Online. http://maps.conservation.ca.gov/mol/mol-app.html.

[115] Division of Oil, Gas, and Geothermal Resources (DOGGR). 2016, February 1. DOGGR Well Finder. http://www.conservation.ca.gov/dog/Pages/WellFinder.aspx.

[116] City of Los Angeles Department of City Planning. 2001, September 26. General Plan Conservation Element. http://planning.lacity.org/cwd/gnlpln/consvelt.pdf.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b. Exposure of people to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-AQ-2	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive noise is not generated by unmaintained equipment.
SC-N-5	LAUSD Facilities Division or its construction contractor shall consult and coordinate with the school principal or site administrator, and other nearby noise sensitive land uses prior to construction to schedule high noise or vibration producing activities to minimize disruption. Coordination between the school, nearby land uses and the construction contractor shall continue on an as-needed basis throughout the construction phase of the project to reduce school and other noise sensitive land use disruptions.
SC-N-6	The LAUSD shall require the construction contractor to minimize blasting for all construction and demolition activities, where feasible. If demolition is necessary adjacent to residential uses or fragile structures, the LAUSD shall require the construction contractor to avoid using impact tools. Alternatives that shall be considered include mechanical methods using hydraulic crushers or deconstruction techniques.
SC-N-8	LAUSD shall meet with the construction contractor to discuss alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. During the preconstruction meeting, the construction contractor shall identify demolition methods not involving vibration-intensive construction equipment or activities. For example: sawing into sections that can be loaded onto trucks results in lower vibration levels than demolition by hydraulic hammers. • Prior to construction activities, the construction contractor shall inspect and report on the current foundation and structural condition of the historic building. • The construction contractor shall implement alternative methods identified in the preconstruction meeting during demolition, excavation, and construction for work done within 25 feet of the historic building. • The construction contractor shall avoid use of vibratory rollers and packers adjacent to a historic building. • During demolition the construction contractor shall not phase any ground-impacting operations near a historic building to

	occur at the same time as any ground impacting operation associated with demolition and construction of a new building. • During demolition and construction, if any vibration levels cause cosmetic or structural damage to a historic building the District shall issue "stop-work" orders to the construction contractor immediately to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures to relieve further damage to the building are implemented.
SC-N-9	LAUSD shall prepare a noise assessment. If site-specific review of a school construction project identifies potentially significant adverse construction noise impacts, then LAUSD shall implement all feasible measures to reduce below applicable noise ordinances. If exterior construction noise levels exceed local noise standards, policies, or ordinances at noise-sensitive receptors, LAUSD shall mandate that construction bid contracts include the measures identified in the noise assessment. Specific noise reduction measures include, but are not limited to, the following: Source Controls • Time Constraints – prohibiting work during sensitive nighttime hours • Scheduling – performing noisy work during less sensitive time periods (on operating campus: delay the loudest noise generation until class instruction at the nearest classrooms has ended; residential: only between 7:00 AM and 7:00 PM) • Equipment Restrictions – restricting the type of equipment used • Noise Restrictions – specifying stringent noise limits • Substitute Methods – using quieter methods and/or equipment • Exhaust Mufflers – ensuring equipment have quality mufflers installed • Lubrication & Maintenance – well maintained equipment is quieter • Reduced Power Operation – use only necessary size and power • Limit Equipment On-Site – only have necessary equipment on-site • Noise Compliance Monitoring – technician on site to ensure compliance • Quieter Backup Alarms – manually-adjustable or ambient sensitive types Path Controls • Noise Barriers – semi-permanent or portable wooden or concrete barriers • Noise Curtains – flexible intervening curtain systems hung from supports • Enclosures – encasing localized and stationary noise sources • Increased Distance – perform noisy activities farther away from receptors, including operation of portable equipment, storage and maintenance of equipment Receptor Controls • Window Treatments – reinforcing the building's noise reduction ability • Community Participation – open dialog to involve affected residents • Noise Complaint Process – ability to log and respond to noise complaints. Advance notice of the start of construction shall be delivered to all noise sensitive receptors adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the District. In the event of noise complaints LAUSD shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance. • Temporary Relocation – in extreme, otherwise immitigable cases. Temporarily move residents or students to facilities away from the construction activity.

Noise and vibration background and modeling data are included as Appendix E of this Initial Study.

Noise is defined as unwanted sound and is known to have several adverse effects on people, including hearing loss, speech and sleep interference; physiological responses; and annoyance. Based on these known adverse effects of noise, the federal government, state, City, and LAUSD have established criteria to protect public health and safety and to prevent the disruption of certain human activities, such as classroom instruction.

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact.

Mobile-Source Noise

The Project would not increase student capacity and therefore would not increase traffic-generated noise levels on local roadways. Traffic noise levels would remain the same as current conditions, and would therefore not violate any applicable portions of the City's noise element or municipal code. No mobile-source noise impact would occur.

Stationary-Source Noise

Stationary noise sources would include vehicles idling during student drop-off and pick-up times, school buzzers or bells, landscaping equipment, outdoor activities, and heating, ventilation and air conditioning (HVAC) systems. For idling vehicles, school buzzers/bells, and landscaping activities, there would be no changes after completion of the proposed Project. These stationary sources would be the same as the current conditions in and around the school campus. Outdoor activities would also be the same at the grass playfield and the hardcourts in the northeast corner of the campus. To the west of the existing grass playfield, the hardcourts will be reduced to accommodate the new gymnasium. Therefore, noise sources near the corner of Victory Boulevard and Yolanda Avenue would be significantly reduced by the size of available play space and by the gymnasium building that will block noise.

The Project would add new sources of stationary HVAC noise at the new classroom building (grades 7–12), elementary classroom building (grades 4–6), and gymnasium, but these would be comparable or quieter than other, similar sources at the existing campus and would not result in notable changes on campus. Additionally, HVAC noise would be considerably lower than ambient noise levels, which are dominated by traffic. Permanent stationary source noise increases would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Operations Vibration

Typically, land uses that result in vibration impacts are (a) industrial businesses that use heavy machinery or (b) railroads where passing trains generate perceptible levels of vibration. The proposed Project is a comprehensive modernization of an existing school, and there would be no significant vibration-generating sources during ongoing operations. Therefore, no impacts would occur.

Construction Vibration

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures, the equipment used, and the proximity to vibration-sensitive uses. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings near a construction site varies depending on soil type, ground strata, and receptor building construction. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight damage at the highest levels. Ground vibrations from construction activities rarely reach levels that can damage structures, but can achieve levels in buildings close to a construction site that are perceptible.[117] Table 9 lists vibration levels for different types of commonly used construction equipment.

Table 9 Typical Construction Equipment Vibration Levels

Equipment	Approximate VdB[1] level at 25 feet	Approximate PPV[2] at 25 feet
Pile Driver, Impact (Upper Range)	112	1.518
Pile Driver, Impact (Typical)	104	0.644
Pile Driver, Sonic (Upper Range)	105	0.734
Pile Driver, Sonic (Typical)	93	0.170
Vibratory Roller	94	0.210
Large Bulldozer	87	0.089
Crane-Mounted Auger Drill	87	0.089
Loaded Trucks	86	0.076
Jackhammer	79	0.035
Small Bulldozer	58	0.003

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.
[1] VdB – vibration level using the reference of 1 microinch/second.
[2] PPV – peak particle velocity measured in inches/second

Construction vibration effects are typically assessed in terms of either architectural damage or annoyance to nearby people. Construction equipment such as pile drivers, jackhammers, high-power or vibratory tools, and heavy rolling stock equipment (tracked vehicles, compactors, etc.) could generate vibration in the immediate vicinity of their use. Typical construction equipment rarely exceeds vibration levels that are perceptible.[118] Groundborne vibration is rarely annoying to people who are outdoors, so it is usually evaluated in terms of indoor receivers. For annoyance, vibration is typically noticed nearby when objects in a building generate noise from rattling windows or picture frames; impacts are based on the distance to the nearest building.[119]

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[117] Federal Transit Administration (FTA). 2006, May. Transit Noise and Vibration Impact Assessment. U.S. Department of Transportation (DoT). FTA-VA-90-1003-06.

[118] As measured at a distance of 25 feet from an individual piece of equipment perceptible vibration would be 0.1 peak particle velocity (PPV) in inches per second. Architectural damage at typical building structures may occur at 0.2 to 0.5 PPV in inches per second.

[119] Federal Transit Administration (FTA). 2006, May. Transit Noise and Vibration Impact Assessment. United States Department of Transportation. FTA-VA-90-1003-06.

Construction Vibration-Induced Annoyance

Human annoyance occurs when vibration rises significantly above the threshold of human perception for extended periods of time. A threshold commonly used to assess when construction vibration becomes annoying is 78 VdB for residential uses.[120]

Off-Campus Receptors

The nearest sensitive receptors are the apartments to the east approximately 550 feet from the center of the construction activities; single-family residences to the north across Victory Boulevard at 570 feet; single-family residences to the west across Yolanda Avenue at approximately 650 feet; and single-family residences to the south across Erwin Street at approximately 525 feet.[121] Table 10 shows the vibration levels from construction equipment at nearby off-campus sensitive receptors. As shown, vibration from construction activities is not anticipated to be perceptible at the nearest off-site receptors.

Table 10 Project-Related Construction Equipment Vibration Annoyance

Equipment	Apartments to East; across alley (VdB at 550 Feet)[1]	Homes to North; across Victory Blvd (VdB at 570 Feet)[1]	Homes to West; across Yolanda Ave (VdB at 650 Feet)[1]	Homes to South; across Erwin Street (VdB at 525 Feet)[1]
Vibratory Roller	54	53	52	54
Caisson Drill	47	46	45	47
Large bulldozer	47	46	45	47
Small bulldozer	18	17	16	18
Jackhammer	39	38	37	39
Loaded trucks	46	45	44	46

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.
Note: Values do not exceed 78 VdB FTA annoyance threshold.
[1] Distance to the nearest receptors are measured from the center of the construction site to represent the average vibration level.
[2] A large bulldozer is above an operating weight of 85,000 pounds (represented by a Caterpillar D8-class or larger); medium bulldozer has an operating weight range of 25,000 to 60,000 pounds (such as a Caterpillar D6- or D7-class); and a small bulldozer has an operating weight range of 15,000 to 20,000 pounds (such as a Caterpillar D3-, D4-, or D5-class).

Generally, heavy equipment would only operate at the Project boundary for brief periods. As heavy construction equipment moves around the construction zone, average vibration levels at the nearest structures would diminish with increasing distance between structures. Construction-generated, average vibration levels would not exceed 78 VdB at any offsite sensitive residential receptors, and therefore would not exceed the threshold for human annoyance. Thus, annoyance vibration impacts to offsite receptors would be less than significant.

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[120] Federal Transit Administration (FTA). 2006, May. Transit Noise and Vibration Impact Assessment. United States Department of Transportation. FTA-VA-90-1003-06.

[121] Annoyance Vibration: Because construction activities are typically distributed throughout the project site, and since mobile construction equipment tends to move around the project site throughout the day, distances from sensitive receptors to noise generating equipment will vary throughout the work day. Therefore, to represent the average vibration annoyance level, distances to the nearest receptor buildings are measured from a spatially averaged point, i.e. the center of the construction site.

On-Campus Receptors

Because construction activities would take place while school is in session and the nearest classrooms would be within about 20 feet of the of the construction zone, the educational environment may be affected by construction activities. There would be several construction zones and active classrooms throughout the campus therefore, it is not possible to provide a specific vibration level for each possible scenario over the course of the entire construction period. Generally, students in classrooms may experience vibration levels in excess of 78 VdB when large equipment operates within 50 feet of the classrooms, and 84 VdB within 35 feet.[122] At 78 VdB vibrations are barely felt, but groundborne noise may be audible. Vibration levels would diminish rapidly with increased distance between the receptors and the equipment, and construction activities farther than 50 feet from classrooms would not be felt or heard.

Implementation of LAUSD Standard Conditions of Approval SC-N-5, SC-N-6, and SC-N-8 provide requirements for: discussions between construction contractor and school administrators prior and throughout construction to schedule high vibration producing activities at times that minimize disruption to classes (N-5); the use of less-vibration-intensive construction equipment for demolition adjacent to fragile structures, such as historic buildings (N-6); and alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts (N-8). Compliance with LAUSD Standard Conditions of Approval SC-N-5, SC-N-6, and SC-N-8 would reduce construction vibration and annoyance to staff and students in adjacent buildings. Impacts would be less than significant.

Construction Vibration-Induced Architectural Damage

A threshold commonly used to assess when there could be a risk of architectural damage is 0.2 peak particle velocity (PPV) in inches per second for typical residential and school buildings.[123]

Off-Campus Buildings. The nearest off-campus buildings are the apartment garages to the east approximately 15 feet from possible heavy construction equipment and single-family residences to the west across Yolanda Avenue at about 100 feet.[124]

On-Campus Buildings. Some buildings, such as Classroom Building B (Building #9), would be less than 20 feet from demolition and construction of buildings.

Table 11 shows the potential vibration levels that could be generated by heavy construction equipment at the nearest receptors.

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[122] 78 VdB is the limit for daytime vibration annoyance at residential buildings.

[123] FTA category "non-engineered timber and masonry buildings"

[124] Vibration Damage: Because architectural damage from construction vibration sources can be a one-time event, vibration damage distances are measured from the nearest likely location at the construction site to the nearest façade of the receptor buildings.

Table 11 Project-Related Construction Equipment Vibration Damage Potential

	Garage to the East (PPV at 15 Feet)1	Homes across Yolanda Ave (PPV at 100 Feet)1	On-Campus Classrooms (PPV at < 20 Feet)1
Vibratory Roller	**~0.375**	0.026	**>0.293**
Caisson Drill	~0.159	0.011	>0.124
Large bulldozer	~0.159	0.011	>0.124
Small bulldozer	~0.005	0.000	>0.004
Jackhammer	~0.062	0.004	>0.049
Loaded trucks	~0.136	0.010	>0.106

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment. May 2006.
Note: Values in bold indicate vibration levels in exceedance of 0.200 PPV in/sec FTA threshold.
[1] For architectural damage, the maximum vibration levels at the closest distance to construction equipment is used.

As shown in Table 11, operation of large heavy construction equipment (most notably, vibratory rollers, but potentially also large bulldozers or loaded trucks) close to adjacent buildings may exceed the FTA's 0.2 PPV in/sec criteria threshold and may result in vibration-induced damage to the building façade.

As part of the Project, implementation of SC-N-6 requires that "if demolition is necessary adjacent to residential uses or fragile structures, the LAUSD shall require the construction contractor to avoid using impact tools. Alternatives that shall be considered include mechanical methods using hydraulic crushers or deconstruction techniques."

Implementation of SC-N-8 provides requirements for the use of alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. Compliance with LAUSD Standard Conditions of Approval SC-N-6 and SC-N-8 would reduce vibration-induced architectural damage to adjacent buildings. Impacts would be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact. As described in section (a) above, Project-related increases in operational noise levels would not increase the existing noise environment. Therefore, no permanent noise impacts would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Noise generated during construction is based on the type of equipment used, the location of the equipment relative to sensitive receptors, amount of equipment operating at the same time, and the timing and duration of the noise-generating activities. Sensitivity to noise is based on the location of the equipment relative to sensitive receptors, time of day, and the duration of the noise-generating activities. Two types of short-term noise could occur during construction: (1) mobile-source noise from the transport of workers, material deliveries, and debris/soil hauling and (2) on-campus noise from use of construction equipment. Demolition and construction activities are anticipated to start in Q3-2018 and last approximately three years.

Construction Vehicles

The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. The primary regional access route for construction vehicles to the school campus would be Victory Boulevard and Reseda Boulevard. The construction staging area would be accessed from Victory Boulevard. It is anticipated that construction-related activities would generate, as a worst-case during the most active phase of construction, a total of 79 construction trips per day.[125] Compared to the traffic generated by the school with 2,100 students (estimated at 3,330 average daily trips [ADT])(see Table 15 under Transportation and Traffic) and current ADT of 32,214 on Reseda Boulevard and 35,801 ADT on Victory Boulevard,[126] 79 trips is negligible.

Additionally, truck trips would be spread out throughout the workday and would occur during non-peak traffic periods in accordance with SC-T-4.

Thus, the number of construction-related trips would not significantly increase traffic noise when compared to the level of noise currently generated on the roadways. While individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (L_{max}) at 50 feet from the vehicle, these occurrences would be infrequent and primarily during nonpeak traffic periods. Therefore, noise impacts from construction-related traffic would be less than significant.

Construction Equipment

Each stage of construction involves the use of different kinds of construction equipment and therefore has its own distinct noise characteristics. Table 12 shows the average noise levels from individual pieces of construction equipment.

Table 12 Average Construction Equipment Noise Levels

Type of Equipment	Average Measured Sound Levels (dBA at 50 feet)	Type of Equipment	Average Measured Sound Levels (dBA at 50 feet)
Pile Driver, Impact	101	Jack Hammers	88
Pile Driver, Sonic	96	Pneumatic Tools	85
Ballast Tamper	83	Pumps	76
Compactor	82	Dozer, Small	80
Concrete Mixer	85	Dozer, Large	86
Crane, Mobile	83	Hydraulic Backhoe	85
Crane, Derrick	88	Hydraulic Excavators	82
Loader, Large	85	Graders	85
Loader, Front-End	79	Air Compressors	81
Paver	89	Trucks	91
Scraper	89		

Sources: US Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, prepared by Bolt, Beranek & Newman, December 1971; Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

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[125] During the most intensive construction phase, it is anticipated that a maximum of 44 worker trips and an average of 35 truckloads of soil export per day Trips based on California Emissions Estimator Model (CalEEMod), version 2016.3.1.

[126] 2001-10 Traffic Volume Book. http://ladot.lacity.org/what-we-do/traffic-volume-counts/current-count-data.

Similarly, Table 13 shows the maximum operational noise levels of heavy construction equipment.

Table 13 Maximum Heavy Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Jack Hammers	75–88	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Pile Driver, Impact	95–110	105
Pile Driver, Sonic	90-105	100
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: US Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, prepared by Bolt, Beranek & Newman, December 1971.

Construction Noise

Construction equipment typically moves around the site and under variable power levels. Noise from construction equipment decreases by 6 to 7.5 dB with each doubling of distance between the source and receptor. For example, the noise levels from a bulldozer that generates 85 dBA at 50 feet would measure 79 dBA at 100 feet, 73 dBA at 200 feet, 67 dBA at 400 feet, and 61 dBA at 800 feet (conservatively using a 6 dB per doubling of distance attenuation factor). Also, noise levels are typically reduced from this value due to usage factors as well as the barrier effects provided by physical structures once erected.

In order to aggregate individual equipment items into sets of common processes/activities, while taking into account typical variations in movements, loading, and usage factors, composite construction noise by phase has been characterized by Bolt Beranek and Newman.[127] In their study, construction noise for ground clearing, excavation, foundations, erection, and finishing are aggregated by class of activity. For commercial projects (including school projects), the loudest phases are typically the excavation and finishing phases, each of which has an aggregate of 89 dBA Leq (equivalent continuous sound level, in decibels when measured at a distance of 50 feet from the summed construction effort). This summed value takes into account both the

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[127] US Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, prepared by Bolt, Beranek & Newman, December 1971.

number of pieces and the spacing of the heavy equipment used in the construction effort. Noise levels are typically reduced from this value due to usage factors as well as the barrier effects provided by the physical structures themselves (once erected). The 89 dBA Leq is the value used for representing most construction activities.

Off-Campus

The nearest off-campus sensitive receptors are the apartments to the east and single-family residences to the north across Victory Boulevard, west across Yolanda Avenue, and south across Erwin Street. Table 14 shows the average construction noise levels at nearby sensitive receptors from use of typical construction equipment.

Table 14 Project-Related Construction Noise Levels

Equipment	Apartments to East (dBA at 550 Feet)	Homes to North (dBA at 570 Feet)	Homes to West (dBA at 650 Feet)	Homes to South (dBA at 525 Feet)
Standard Construction Activities	68	68	67	69

Sources: US Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, prepared by Bolt, Beranek & Newman, December 1971; Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

As shown in Table 14, the construction noise levels would average between 67 and 69 dBA Leq at the nearest residences. Thus, construction activity would not exceed the noise ordinance's limit of 75 dBA on a day-to-day or week-to-week basis. However, there may be short periods on any given day when a noisy piece of equipment could be near the campus boundary. In these sporadic cases, noise levels at nearby receptors may intermittently and temporarily exceed the noise ordinance's limit of 75 dBA. Additionally, for some construction activities, noise would be attenuated (reduced) by school buildings between the construction zone and residents.

According to Section 41.40 of the Los Angeles Municipal Code (LAMC), construction or repair work is allowed between 7:00 AM and 9:00 PM, Monday through Friday, and between 9:00 AM and 6:00 PM on Saturdays. Further, Section 112.05 of the LAMC specifies the maximum noise level for construction within 500 feet of residential uses as 75 dBA at a distance of 50 feet from the source. However, this noise limitation does not apply where compliance is technically infeasible. Therefore, a significant impact would occur if 1) construction were to occur outside of the allowable hours or 2) such activities generated more than the allowable noise level with no attempt to reduce that noise. The District contractor would comply with permitted construction hours, and noise reduction measures have been incorporated into the Project. Based on estimated noise levels, impacts to surrounding residents would be less than significant.

On-Campus

Classrooms located within 500 feet of construction activities and direct sightline, may experience exterior noise levels in excess of 70 dBA L_{eq}. With a typical 25 dB exterior-to-interior noise reduction, interior noise levels may exceed 45 dBA L_{eq}. Classrooms that are within 100 feet of construction could experience interior noise levels as high as 58 dBA L_{eq} (exterior noise level of 83 dBA L_{eq}). 45 dBA Leq is LAUSD's interior noise threshold, and therefore, interior levels above 45 dBA L_{eq} could be disruptive to the learning environment.

However, low-intensity construction phases would generate lower noise levels and would be less likely to result in disruptions. Additionally, for some construction activities, noise would be attenuated (reduced) by buildings between the construction zone and classrooms.

Implementation of LAUSD Standard Conditions of Approval SC-AQ-2, SC-N-5, SC-N-8 and SC-N-9 provide requirements for: construction equipment that is properly tuned and maintained to ensure excessive noise is not generated (SC-AQ-2); discussions between construction contractor and school administrators prior to and throughout construction to schedule high noise producing activities at times that minimize disruption to classes (SC-N-5); and alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts (SC-N-8) (this measure would also reduce noise in classrooms). Additionally, in compliance with SC-N-9 requires source controls (time constraints, equipment location and type restrictions, etc.), path controls (noise barriers), and/or receptor controls (notification and noise complaint process) to reduce noise impacts. Compliance with LAUSD Standard Conditions of Approval SC-AQ 2, SC-N-5, SC-N-8 and SC-N-9 would reduce noise levels to active classrooms. Construction noise impacts would be less than significant.

e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact. The nearest public airport is Van Nuys Airport, located 3.2 miles to the northeast of the school. Other nearby public airports include Whiteman Airport (8.8 miles northeast) and Bob Hope Airport (10.5 miles east).[128] At these distances, aircraft operation noise would not be expected to notably affect the noise environment at the school. No impact related to noise from public airports would occur.

f) **For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

No Impact. The school is not located within the immediate vicinity of a private airstrip or heliport. The nearest heliport is the Northridge Hospital Heliport, 2.4 miles to the north of the school. There are no private airports within 15 miles of the school.[129] The proposed Project would not expose students to excessive noise levels from private airstrip or heliport noise. No impact-related to noise from heliports or private airstrips would occur.

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[128] Airnav.com. 2017, January 27. Airport Information. http://www.airnav.com/airports/.

[129] Airnav.com. 2017, January 27. Airport Information. http://www.airnav.com/airports/.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PEDESTRIAN SAFETY. Would the project:				
a. Substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses?	☐	☐	☒	☐
b. Create unsafe routes to schools for students walking from local neighborhoods?	☐	☐	☒	☐
c. Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard?	☐	☐	☒	☐

Explanation:

The following LAUSD Standard Condition of Approval applies to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-T-4	LAUSD shall require its contractors to submit a construction worksite traffic control plan to the LADOT for review prior to construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.

a) Substantially increase vehicular and/or pedestrian safety hazards due to a design feature or incompatible uses?

Less Than Significant Impact. The school campus is in a densely developed urban area characterized by residential and commercial land uses. Incompatible uses for a school would include agricultural operations or logistic distribution centers that have large tractors, semi-trailer trucks, and oversized equipment traveling the local roadways that may create a hazard to cars or pedestrians. The school has passenger vehicle traffic (personal vehicles and trucks), non-motorized traffic (pedestrians and bicyclists), and limited truck traffic for school deliveries on the surrounding roadways.

Project design features that would result in vehicular and/or pedestrian safety hazards would be sharp curves or dangerous intersections. These typically consist of new roads or driveways on busy roadways with left or right turns that force cross-traffic and create conflicts between cars and people. The proposed Project would not create new roads or driveways. Student access and drop-off and pick-up locations would remain the same as existing conditions.

Construction of the proposed Project may be considered an incompatible use because it would require the use of haul trucks, equipment, worker vehicles, and construction activities on the school campus while students are on the campus.

The construction and demolition activities would result in a temporary increase in truck activity on the roadway network, but the trucks would not exceed the size and weight limits for public roadways and would not travel during peak traffic hours. Because the staging area is on Victory Boulevard, vehicles and equipment would not travel on Yolanda Avenue or Erwin Street. Construction activity would not require roadway or sidewalk closures and/or traffic detours on school days.

To avoid conflicts between construction activities and students, a multi-phased plan has been developed to ensure student safety. Figure 11 shows the construction phasing plan. As shown, temporary student classrooms would be placed as far away as possible from the construction zones. The fenced construction staging (i.e., storage of equipment and materials) and truck access would be from Victory Boulevard on the north side of the school.

In compliance with Standard Condition of Approval SC-T-4, LAUSD's construction contractor would prepare a construction worksite traffic control plan prior to construction. This plan would establish methods to avoid conflicts between the construction traffic and the existing vehicle, pedestrian, and bicycle traffic on the school campus and in the neighborhood. LAUSD's construction BMPs, identified in the construction worksite traffic control plan, would include the location of haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. Additionally, construction zones on the campus would include fencing to separate construction zones from students and ensure safety. Safety personnel would be onsite during all construction activities to monitor areas around the construction zone. Additionally, the construction contractor would work closely with the school administration during construction to coordinate activities and ensure students are safe. Compliance with SC-T-4, which requires a construction worksite traffic control plan to be prepared and implemented per the Los Angeles Department of Transportation (LADOT) and Caltrans standards, and implementation of on-campus safety BMPs would reduce vehicle, pedestrian, and bicycle impacts during construction. Impacts would be less than significant.

b) Create unsafe routes to schools for students walking from local neighborhoods?

Less than Significant Impact. The proposed Project would not create unsafe routes to schools for students walking from local neighborhoods. The proposed Project would not bring more students to the school campus. The campus would continue to house the existing school programs and continue to serve approximately the same number of students from the same geographic area after Project implementation. The proposed Project would not alter the existing pedestrian routes to school. During construction, pedestrian routes in the surrounding neighborhood, including streets and sidewalks, would not be affected. Routes to school impacts would be less than significant.

c) Be located on a site that is adjacent to or near a major arterial roadway or freeway that may pose a safety hazard?

Less Than Significant Impact. The construction area is on the SOCES school campus. There are no freeways adjacent to or near the school. The closest freeway is the Ventura Freeway, approximately 0.75 mile to the south.

The school campus is adjacent to Victory Boulevard and Reseda Boulevard, which are classified as Major Arterials by the City of Los Angeles.[130] However, the Project would not change existing operations at the school. The school would continue to house the existing school programs and continue to serve

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[130] Reseda-West Van Nuys Community Plan Area. http://planning.lacity.org/complan/valley/respage.htm

approximately the same number of students from the same geographic area after Project completion. Student routes to school would not be changed by the proposed Project. The proposed Project would not introduce any new hazards related to major arterial roadways or freeways, and impacts would be less than significant

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	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Explanation:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The proposed Project would not induce population growth. The Project would make physical changes at an existing campus. New roads, expanded utility lines, and housing that could induce population growth would not be constructed as part of the school modernization project. No impacts related to population growth would occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. No housing would be displaced and no replacement housing would be required. The proposed Project would modernize an existing school campus. No housing impacts would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. As previously noted, there are no residents onsite. No impact would occur.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☒	☐
b. Police protection?	☐	☐	☒	☐
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Condition of Approval applies to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-PS-1	LAUSD shall: 1) have local fire and police jurisdictions review all construction and site plans prior to the State Fire Marshall's final approval; and 2) provide a full site plan for the local review, including all buildings, both existing and proposed, fences, drive gates, retaining walls, and other construction affecting emergency vehicle access, with unobstructed fire lanes for access indicated.

a) Fire protection?

Less than Significant Impact. The Los Angeles Fire Department (LAFD) currently provides fire protection and emergency medical services to the school. The nearest LAFD station to the school campus is Station 93 at 19059 Venture Boulevard, in the Community of Tarzana in the City of Los Angeles, and about one mile to the southwest on the south side of the Ventura Freeway.[131] The LAFD already provides fire protection and emergency medical services to the school and surrounding area. The proposed Project would not make any programmatic changes at the campus and would not increase the intensity of use of the school; therefore, it would not increase the need for fire protection services. The LAUSD is required to coordinate with the LAFD regarding fire equipment access during construction and specifications for the new emergency access driveways. Modernization of the school would not require construction of new or expanded fire stations; impacts would be less than significant.

b) Police protection?

Less than Significant Impact. LAUSD's Los Angeles School Police Department (LASPD) focuses its work on improving campus safety and creating safe school passages for students, staff, and school community.[132] The school is in the LASPD's Northwest Division. The Northwest Division station is on the Birmingham

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[131] Los Angeles Fire Department (LAFD). 2016, February 1. FireStatLA. http://www.lafd.org/fsla/stations-map.

[132] Los Angeles School Police Department (LASPD). About LASPD. http://achieve.lausd.net/Page/8851.

Community Charter High School campus, 17000 Haynes Street in Van Nuys.[133] If required, LASPD would request assistance from the Los Angeles Police Department Pacific Division. The Pacific Division Station is at 19020 Vanowen Street, in the Community of Reseda in the City of Los Angeles, and about 0.5 mile northwest of the school.[134] The proposed Project may cause a very slight increase in demands for police services during construction from possible trespass, theft, and/or vandalism. The staging area would be fenced, and school campus is currently fenced and would remain secured during non-work hours. Any increase in police demands would be temporary and would not require construction of new or expanded police facilities. General campus activities are under the supervision of the teachers and staff at the school. The new buildings and other upgrades would not introduce new adverse impacts on existing police service. Impacts would be less than significant.

c) Schools?

No Impact. The proposed Project would not have an adverse physical impact on any existing schools. The proposed Project would make physical changes to the existing campus to enhance existing school programs. The modernized campus would not induce growth in the community, increase enrollment or capacity at the school, or otherwise increase demand for school services. No impacts to schools would occur.

d) Parks?

No Impact. The proposed Project would not have an adverse physical impact on any parks or necessitate the construction of new parks. The proposed Project would not induce growth in the community, increase enrollment or capacity at the school, or otherwise increase the use of or demand for parks. No impacts to parks would occur.

e) Other public facilities?

No Impact. The proposed Project would not result in impacts associated with the provision of other new or physically altered public facilities (e.g., libraries, hospitals, childcare, teen or senior centers). Physical impacts to public services are usually associated with population in-migration and growth, which increase the demand for public services and facilities. The proposed Project would not result in an increase in school enrollment or capacity or induce population growth. Therefore, no impacts to other public facilities would occur.

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[133] LAUSD School Police Department (LASPD). Northwest Division. http://achieve.lausd.net/Page/9411

[134] Los Angeles Police Department (LAPD). 2016, February 1. http://www.lapdonline.org/.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION.				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Explanation:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. The proposed Project would not accommodate an increased enrollment or capacity of the school and would not increase population in the surrounding community. Therefore, it would not increase the use of existing neighborhood and regional parks or other recreational facilities and would not cause physical deterioration of these facilities. No impacts to existing parks would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

No Impact. The proposed Project includes improvements to the existing athletic facilities at the school, including construction of a new gymnasium. The environmental effects of the construction and operation of these proposed changes to recreational facilities is considered throughout the environmental analysis. The proposed Project would not require the construction or expansion of additional recreational facilities that would have an adverse effect on the environment. No impacts related to recreational facilities would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION AND CIRCULATION. Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel, and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b. Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d. Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Condition of Approval applies to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-T-4	LAUSD shall require its contractors to submit a construction worksite traffic control plan to the local City or County jurisdiction for review prior to construction. The plan shall show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact.

Existing Conditions

The school serves 4th through 12th grades. Students attend classes from August through June from approximately 8:00 AM to 3:20 PM. The school has after-school programs for the students that end later than 3:20 PM.

Roadways

Reseda Boulevard is a north-south road that is east of the school and is designated as a Major Highway Class II in the Reseda-West Van Nuys Community Plan. It has two lanes in each direction in the Project vicinity, and the posted speed limit is 35 mph. Striped Class I bike lanes are provided on both sides of the street.

Yolanda Avenue is a north-south local street that abuts the west side of the school. It has one lane in each direction and there is no posted speed limit.[135] Bus loading and unloading takes place in an off-street (on-campus) loading zone parallel to Yolanda Avenue. No stopping or parking is allowed along Yolanda Avenue on school days.

Victory Boulevard is an east-west road that abuts the north side of the school and is designated as a Major Highway Class II in the Reseda-West Van Nuys Community Plan. It has two westbound lanes, three eastbound lanes, and the posted the speed limit is 45 mph. A 25-mph school zone is designated along Victory Boulevard between Reseda Boulevard and Yolanda Avenue. No parking or stopping is allowed on the south side of Victory Boulevard along the north school frontage.

Erwin Street is an east-west local street that abuts the south side of the school. It has one lane in each direction and the posted the speed limit is 30 mph. A 25-mph school zone is designated along Erwin Street between Reseda Boulevard and Yolanda Avenue. The main entrance to the campus is along Erwin Street and the main student drop-off and pick-up takes place along the north side of Erwin Street. 'No Stopping' and 'Passenger Loading' signs limit the location and amount of time cars are allowed along the Erwin Street curb.

Intersection Controls

Reseda Boulevard at Victory Boulevard is controlled by traffic signals with white continental-style crosswalks (horizontal stripes are the same width as the spaces in between stripes) on all approaches and pedestrian signal buttons at each corner.

Reseda Boulevard at Erwin Street is controlled by traffic signals with white continental-style crosswalks on all approaches and pedestrian signal buttons at each corner.

Victory Boulevard at Yolanda Avenue is controlled by 4-way stop signs and has yellow basic school crosswalks on two of the four crossings, but not on the northbound or eastbound approaches.

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[135] State of California 2015 Vehicle Code, Article 22352, page 437. Unless otherwise posted the Prima Facie Speed Limits is 25mph when approaching or passing a school building or the grounds.

Erwin Street at Yolanda Avenue is controlled by 4-way stop signs and has yellow basic school crosswalks (solid lines marking both edges of the crosswalk) on three of the four crossings, but not on the northbound approach.

Public Transit, Pedestrian and Bicycle Facilities

Several public transit routes are located near the school. The Los Angeles County Metropolitan Transportation Authority (Metro) operates the Route 164 bus line on Victory Boulevard adjacent to the school and Routes 150, 240, and 744 bus lines on Reseda Boulevard near the school. The proposed Project would not adversely affect the performance of these transit facilities because the proposed Project would not change the number of students who attend the school or the travel patterns of the students.

Paved sidewalks are on both sides of all surrounding streets, and no midblock crosswalks are present. There are no existing bicycle facilities on the segments of roadways adjacent to the school.

Parking

The school has three on-campus parking lots: 72 spaces in Student and Staff Parking Lot #3 in the northwest campus with access from Yolanda Street; 40 spaces in Staff Parking Lot #2 in the southeast corner of the school with two access driveways from Erwin Street; and 12 spaces in Staff Parking Lot #1 on the south side of the school adjacent to Building H with access from Erwin Street. Curbside public parking is available along both sides of Erwin Street, Yolanda Avenue, and Reseda Boulevard and along the surrounding local streets.

Operational Phase Impacts

The Project proposes replacing the relocatable classrooms with a new two-story elementary school building; rebuilding the gymnasium in a new location on the northwest corner of the campus; replacing aging classrooms on the west campus; and replacing the lunch shelter. The existing school has 2,100 students. There would be no increase in capacity or enrollment with the Project, and therefore no net increase in vehicular trips. The Project would not change the existing access driveways to parking lots or student drop-off and pick-up areas, or alter any street configurations. The school would continue to function as a magnet school campus.

No changes to traditional school operations, school-related events, or community use would occur as the result of this Project. The levels of traffic that would be generated by the school and the geographical distribution of the school traffic on the public street network would remain unchanged compared to existing conditions. The proposed Project would not change enrollment or capacity, and thus would not change operational trip generation and traffic impacts. The following analysis focuses on construction traffic and the roadways and intersections that would be affected.

Construction Phase Impacts

The comprehensive modernization Project includes building demolition, new construction, remodel, modernizations, upgrades, and reconfiguration. It is anticipated that the Project would be built in two phases spanning approximately 36 months, from Q3-2018 to Q2-2022, and would generate construction-related trips from the work crew, haul trips, and equipment and materials delivery. According to Section 41.40 of the Los

Angeles Municipal Code, construction or repair work is allowed between 7:00 AM and 9:00 PM, Monday through Friday, and between 9:00 AM and 6:00 PM on Saturdays.

Construction Staging Area

A Victory Boulevard driveway between Building 32 (Guidance Center) and the playfield would provide access for a construction staging area. Construction trucks would enter and exit the school campus via this exclusive driveway and would not affect the existing school driveways or parking lots. Construction staging (i.e., storage of equipment and materials) would be contained on the Project site. Parking for workers is anticipated to be provided in the staging area during all phases of construction. Construction workers would not be allowed to park on local streets and therefore would not affect street parking.

Construction Worker Trips

Throughout construction, the size of the work crew at the school each day would vary depending on the construction phase and the different construction activities taking place. The highest number of worker trips would occur during the overlapping building construction and modernization (i.e., building interiors) activities, with an anticipated maximum of 44 worker trips per day.[136]),[137] 44 worker trips per day is a negligible increase compared to existing traffic.

Additionally, on most days the number of workers would be less. Based on the anticipated construction schedule, construction workers are expected to arrive at the school between 6:00 AM and 7:00 AM (before peak morning commute hours). Construction workers are not all likely to arrive at the construction site within the same hour, nor would they all leave the site at the same time. Importantly, construction worker trips and construction haul trips would not occur at the same time because workers would arrive before 7:00 AM and hauling cannot start until 7:00 AM. Typical construction hours end after 3:30 PM, after student dismissal times. Construction worker traffic would not significantly impact nearby roadways.

Truck Haul Trips and Deliveries

Construction activities would include the hauling of soil, asphalt demolition debris, building demolition debris, relocatable buildings, and equipment and materials. The highest number of haul trips per day would occur during the construction site preparation activity. Site Preparation and Modernization activities (see Table 3 in Chapter 3) would export approximately 10,780 cubic yards of soil, for a total of 770 truckloads.[138] The anticipated two-month schedule for soil haul would require an average of 35 truckloads per day, for a total of 18 trucks inbound and 17 trucks outbound from the construction site per day.[139]

Compared to the traffic generated during the day by the school with an estimated 3,330 ADT, 35 construction-phase haul trips is negligible. Additionally, truck trips would be spread out throughout the workday and would occur during non-peak traffic periods in accordance with SC-T-4.

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[136] Worker trips based on California Emissions Estimator Model (CalEEMod), version 2016.3.1.

[137] Based on the ITE Trip Generation Manual 9th Edition. Public school daily trip rates: Elementary School - 470 students at 1.29=606 trips, Middle School/Junior High School - 700 students at 1.62 = 1,134 trips, High School - 930 students at 1.71 = 1,590 trips. Total estimated trips for 2,100 students is 3,330.

[138] 14 cubic yards per truckload.

[139] Two months equates to 44 working days.

Temporary delays in traffic may occur due to oversized vehicles traveling at lower speeds on streets. Such delays would be occasional and of short duration. The temporary traffic delays would only occur during a relatively short period of two months during phase 1 and two months during phase 2. During the 12-month building construction period, there would be traffic from an estimated 12 delivery trucks per day. Given the small number of trips per day and the duration of the construction phases, these temporary delays are considered less than significant.

To minimize potential conflicts between construction activity and street traffic, a truck haul permit would be submitted to the City for review and approval. Construction equipment, materials traffic, and haul trucks would be restricted to truck routes approved by the City of Los Angeles Department of Building and Safety. These do not include neighborhood streets. The truck trips would be spread out throughout the workday and would occur during nonpeak traffic periods in accordance with SC-T-4.

Construction vehicles would cause only temporary and intermittent increases in traffic on area roadways, and would not contribute to a significant increase in traffic volumes. Construction traffic would be less than significant.

Public Transit and Pedestrian and Bicycle Facilities

Project construction traffic would not impact public transit bus services on Miles Avenue or Slauson Avenue.

The construction worksite traffic control plan would include measures to prevent traffic and pedestrian hazards between trucks entering and exiting the staging area off Victory Boulevard and pedestrians on the sidewalk and bicyclists on Victory Boulevard. Impacts would be less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. Metro implements the county's congestion management program (CMP). The CMP includes a system of arterial roadways and freeways. The CMP for Los Angeles County requires that the traffic impact of individual development projects of potential regional significance be analyzed. The nearest CMP intersection to SOCES is the intersection of Victory Boulevard at Reseda Boulevard, approximately 200 feet to the east of SOCES. The CMP guidelines require that freeway monitoring locations must be examined if the proposed Project would add 150 or more trips (in either direction) during either the AM or PM weekday peak hours or 50 or more trips at CMP intersections during the AM or PM weekday peak hour. The proposed Project would not meet this threshold for preparing a CMP facility traffic impact assessment.

The proposed Project would not increase the capacity or enrollment at the school and therefore would not directly contribute to increases in traffic at the CMP intersection during AM and PM peak hour traffic. The Project would not alter the traffic patterns in the vicinity of the school or cause a substantial increase in traffic volumes. In addition, traffic during construction would not result in a substantial amount of traffic to the vicinity of the school (see item [a]). No operational impacts would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The nearest airport to the school campus is the Van Nuys Airport, which is approximately three miles to the northeast of the school campus. The school campus is not within the airport influence area and the airport land use planning area of the Van Nuys Airport. Project development would not result in a new use that would interfere with air traffic patterns or change traffic locations such that it would result in a safety risk. In addition, the Project would not increase demand for air travel or increase air traffic levels. No impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less Than Significant Impact. During construction of the Project, construction equipment, trucks, and workers would drive to and from the staging area via the temporary exclusive driveway on Victory Boulevard. The truck trips would be spread out throughout the workday and would occur during nonpeak traffic periods in accordance with SC-T-4. In compliance with SC-T-4, LAUSD's construction contractor would prepare a construction worksite traffic control plan prior to construction, which would be reviewed by the City of Los Angeles. This plan would establish methods to avoid conflicts between the construction traffic and the existing street, pedestrian, and bicycle traffic. LAUSD's construction BMPs, identified in the construction worksite traffic control plan, would include the location of haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. Additionally, construction fencing would be used on campus to separate construction zones from students to ensure safety. Implementation and compliance with the construction worksite traffic control plan would address potential hazardous conditions. The proposed Project construction would not create new hazards or conflicts, and impacts related to vehicular or pedestrian and bike safety would be less than significant.

The proposed Project would not increase the capacity or enrollment at the school and would therefore not increase operational traffic on or around the campus. The Project would not alter the use of the school campus, and no new incompatible uses would be introduced. The streets in the school vicinity have sidewalks, and the signalized intersections are equipped with painted crosswalks, pedestrian signals, and pedestrian push buttons to activate the signals. Bicycle lanes exist on Reseda Boulevard in the school vicinity and would remain unchanged. The number of students and the geographical distribution of the students' residences would remain unchanged. No operational impacts would occur.

e) Result in inadequate emergency access?

No Impact. The proposed Project would not result in inadequate emergency access. The access and circulation features at the school would continue to accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. In addition, new emergency access driveways and internal fire lanes would be provided through the campus to access the school buildings, hardcourts, and playfield. All access features are subject to and must satisfy City of Los Angeles Fire Department design requirements. There would, therefore, be no adverse emergency access impacts.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The proposed Project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Construction would not create new hazards or conflicts, and impacts related to vehicular or pedestrian and bike safety would be less than significant as discussed in item (d).

Following construction, the Project would be consistent with policies supporting public transit, bicycle, and pedestrian facilities because no changes would occur to bus loading/unloading zones, sidewalks along the streets in the school's vicinity, pedestrian crosswalks and signals in the school vicinity, bike lanes along Reseda Boulevard, or public transit. The proposed Project would not, therefore, conflict with policies, plans, or programs regarding transit, bicycle, or pedestrian facilities, and the Project would not decrease the performance or safety of such facilities. No operational impacts would occur.

4. Environmental Checklist and Analysis

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	☐	☐	☐	☒
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

Explanation:

a) **Cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).**

No Impact. Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American tribes on potential impacts to tribal cultural resources, as defined in PRC Section 21074. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources.[140]

As part of the AB 52 process, Native American tribes must submit a written request to LAUSD (lead agency) to be notified of projects within their traditionally and culturally affiliated area. LAUSD must provide written, formal notification to those tribes within 14 days of deciding to undertake a Project. The tribe must respond to LAUSD within 30 days of receiving this notification if they want to engage in consultation on the Project, and LAUSD must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either 1): the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

To date the District has not received any tribal requests to be notified about Projects in the District. Additionally, although the school is eligible for listing on the National Register of Historic Places and the California State Register of Historic Places, no tribal cultural resources listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public

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[140] California Natural Resources Agency. AB 52 Regulatory Update. http://resources.ca.gov/ceqa/.

Resources Code Section 5020.1(k) are known on the campus. Known tribal cultural resources would not be impacted by the Project.

b) Cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency to be significant pursuant to criteria in Public Resources Code Section 5024.1(c).

No Impact. To date, LAUSD has not received any requests for notification or consultation from California Native American tribes regarding resources defined by PRC Section 21074. Additionally, neither the school nor the surrounding area has been identified as having a high prehistoric or historic archaeological sensitivity.[141] Therefore, the proposed Project would not be expected to result in an impact related to tribal cultural resources.

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[141] City of Los Angeles. Citywide General Plan Framework Final Environmental Impact Report. Certified August 8, 2001. Chapter 2.15 - Cultural Resources. http://cityplanning.lacity.org/HousingInitiatives/HousingElement/FrameworkEIR/GPF_DraftEIR/GPF_FEIR_DEIR2.15.pdf.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d. Have sufficient water supplies available to serve the project from existing entitlements and resource, or are new or expanded entitlements needed?	☐	☐	☐	☒
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Explanation:

The following LAUSD Standard Conditions of Approval apply to the proposed Project:

LAUSD Standard Conditions of Approval	
SC-USS-1	School Design Guide. (Book Two General Criteria, Section 2.4. C.2.f.1) Construction and demolition waste shall be recycled to the maximum extent feasible. LAUSD has established a minimum non-hazardous construction and demolition debris recycling requirement of 75% by weight as defined in Specification 01340, Construction & Demolition Waste Management. Guide Specifications 2004 - Section 01340, Construction & Demolition Waste Management. This section of the LAUSD Specifications includes procedures for preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in landfills. Requires the collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the C&D waste generated.
SC-USS-2	LAUSD shall coordinate with the City of Los Angeles Department of Water and Power or other appropriate jurisdiction and department prior to the relocation or upgrade of any water facilities to reduce the potential for disruptions in service.
SC-GHG-1	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping, and tanks to minimize water loss.
SC-GHG-2	LAUSD shall set automatic sprinklers to irrigate landscaping during the early morning (overhead and drip) and evening (drip only) to reduce water loss from evaporation.

SC-GHG-3	LAUSD shall reset automatic sprinkler timers to water less during cooler months and during the rainy season.
SC-GHG-4	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.
SC-GHG-5	LAUSD shall ensure that the time dependent valued energy of the proposed Project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the project is submitted to the Division of the State Architect.

a) Exceed waste water treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact. The proposed Project would not exceed wastewater treatment requirements of the LARWQCB. The LARWQCB sets waste discharge requirements for discharges to municipal storm drains that would apply to the operation phase of the Project; construction impacts to stormwater are regulated by the SWRCB and are discussed above in Section IX, *Hydrology and Water Quality*. Impacts related to LARWQCB requirements would be less than significant.

b) Require or result in the construction of new water or waste water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Water treatment facilities filter and/or disinfect water before it is delivered to customers. The Los Angeles Department of Water and Power currently provides water to the existing school and would continue to supply water to the school. The proposed Project would serve existing and future students living in the region, and would not increase the student population or water treatment demands in the Project region. No impact would occur.

The proposed Project would not increase the student population or wastewater generation in the Project region. Development of the proposed Project would not require construction of new or expanded wastewater treatment facilities, and no impact would occur.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. Project development would include storm drainage improvements onsite discharging to the existing storm drainage infrastructure. Runoff from the proposed buildings would be conveyed by existing storm drains. LID stormwater management would be incorporated into the Project design pursuant to requirements of the Los Angeles LID Handbook and SC-HWQ-01. LID principles are described further in Section VI, *Geology and Soils*, of this Initial Study. Therefore, the campus drainage system would discharge a net decrease in runoff to municipal storm drains. Construction of the onsite stormwater management measures would not cause a significant impact on the environment. The proposed Project would not require the construction of new or expanded storm drains. No impact would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact. The school currently serves students living in the region, and school modernizations would not increase the student population or long-term water demands in the Project region. Water would be used on site for dust suppression and similar activities. The small amount of water that would be used for Project construction would not result in the need for new or expanded water entitlements. Installation of landscape and irrigation improvements would comply with SC-USS-2, SC-USS-3, and SC-GHG-1 through SC-GHG-4 for water conservation. No impact would occur.

e) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Project development would not impact wastewater treatment capacity, as substantiated in (a) and (b) above.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Landfilled solid waste from the City of Los Angeles is disposed of at the Sunshine Canyon City/County Landfill in the Community of Sylmar in the City of Los Angeles. The proposed Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. The proposed Project would not increase the student population and would not increase solid waste generation and therefore, impacts would be less than significant.

The proposed Project would generate some contaminated soil and material (see VIII, *Hazards and Hazardous Materials*). Contaminated soil and material would result in an incremental and intermittent increase in solid waste disposal at licensed landfills and other waste disposal facilities within Los Angeles and/or Orange counties. The District would be required to comply with the Sanitation Districts of Los Angeles County and/or Orange County Waste and Recycling programs for contaminated soil and material.

Demolition and construction waste would be generated and disposed of at one or both of the two landfills operated by the Sanitation Districts of Los Angeles County: Calabasas or Sholl Canyon Landfill. Section 5.408 (Construction Waste Reduction, Disposal, and Recycling) of the CALGreen Building Standards Code (Title 24, CCR, Part 11, Section 5.408.1.1) requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse. This is also required by CHPS criteria. Under SC-USS-1, LAUSD has established a minimum construction and demolition debris salvage, recycle, and reuse of 75 percent. Construction of the proposed Project would adhere to these established standards. Therefore, demolition of existing onsite improvements would not adversely impact such landfills. Impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The school administrators and the school district currently comply with federal, state, and local statutes and regulations related to solid waste, and would continue this practice. No impact would occur.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. MANDATORY FINDINGS OF SIGNIFICANCE.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐
b. Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).	☐	☐	☒	☐
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Explanation:

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Impact. As discussed in Sections I, *Aesthetics*; IV and *Biological Resources* the project would neither degrade the quality of the environment nor substantially impact any endangered fauna or flora. The Project would demolish and construct new buildings, and modernize others on an existing school campus and would not change the aesthetic appearance of the surrounding neighborhood. Because the school is fully developed and the surrounding area is highly urbanized, the Project would not impact the habitat or population level of a fish, plant, or animal community or the range of a rare or endangered plant or animal. Mandatory compliance with LAUSD Standard Condition SC-BIO-3 would reduce impacts to nesting birds.

As discussed under Section V, *Cultural Resources* impacts related to archaeological and paleontological resources and human remains would be less than significant levels with implementation of LAUSD Standard Conditions SC-CUL-13 through SC-CUL-18 and compliance with existing regulations. However, impacts related to historic resources would be potentially significant. Potential historic resource impacts will be fully analyzed in the EIR.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact. Based on the preceding discussion, with implementation of LAUSD Standard Conditions of Approval and compliance with existing regulations, the proposed Project would not result in significant adverse impacts that could contribute to a cumulatively considerable impact.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less Than Significant Impact. As discussed in the above analyses for the Project, with implementation of LAUSD Standard Conditions of Approval and compliance with existing regulations, the proposed Project would not result in significant direct or indirect adverse impacts. Thus, the Project would not have the potential to result in substantial adverse effect on human beings.

5. List of Preparers

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5. List of Preparers

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Appendix A.

Air Quality and Greenhouse Gas Emissions Background and Modeling Data

Air Quality and Greenhouse Gas Background and Modeling Data

AIR QUALITY

Climate/Meteorology

SOUTH COAST AIR BASIN

The project site lies within the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site is the Woodland Hills Pierce College Monitoring Station (ID No. 049785). The average low is reported at 38.8°F in December, and the average high is 95.5°F in August (WRCC 2017).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. The historical rainfall average for the project area is 16.67 inches per year (WRCC 2017).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).

Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

AIR QUALITY REGULATORY FRAMEWORK

The proposed project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The project site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (SCAQMD). However, SCAQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the proposed project are summarized below.

AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1 these pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Lead (Pb)	30-Day Average	1.5 μg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 μg/m^3	
	Rolling 3-Month Average	*	0.15 μg/m^3	
Sulfates (SO_4)[5]	24 hours	25 μg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016a.

Notes: ppm: parts per million; μg/m^3: micrograms per cubic meter

* Standard has not been established for this pollutant/duration by this entity.

[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

[3] On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[4] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/m^3 to 12.0 μg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/m^3, as was the annual secondary standard of 15 μg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[5] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

CRITERIA AIR POLLUTANTS

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that AAQS have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and nitrogen dioxide (NO_2) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented below.

- **Carbon Monoxide** is a colorless, odorless gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005; USEPA 2016). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2015a).

- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O_3, SCAQMD has established a significance threshold.

- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_X are nitric oxide (NO) and nitrogen dioxide (NO_2). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO_X produced by combustion is NO, but NO reacts quickly with oxygen to form NO_2, creating the mixture of NO and

NO_2 commonly called NO_X. NO_2 is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO_2 is only potentially irritating. NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO_2 exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO_2 concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA 2016). The SoCAB is designated an attainment area for NO_2 under the National and California AAQS (CARB 2015a).

- **Sulfur Dioxide** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2. When sulfur dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO_2, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (SCAQMD 2005; USEPA 2016). The SoCAB is designated attainment under the California and National AAQS (CARB 2015a).

- **Suspended Particulate Matter** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the

EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[1] environmental damage,[2] and aesthetic damage[3] (SCAQMD 2005; USEPA 2016). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2015a).

- **Ozone** is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_X, both by-products of internal combustion engine exhaust, undergo photochemical reactions in sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for its formation. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (SCAQMD 2005; USEPA 2016). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2015a).

- **Lead** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (SCAQMD 2005; USEPA 2016). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[4] As a result of these violations,

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[1] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[2] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[3] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[4] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and

the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2015a). Because emissions of lead are found only in projects that are permitted by SCAQMD, lead is not a pollutant of concern for the proposed project.

TOXIC AIR CONTAMINANTS

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle

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Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2012).

mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public through notices and public meetings.

CARB has promulgated the following specific rules to limit TAC emissions:

- CARB Rule 2485 (13 CCR Chapter 10, Section 2485), Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- CARB Rule 2480 (13 CCR Chapter 10, Section 2480), Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- CARB Rule 2477 (13 CCR Section 2477 and Article 8), Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3 butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

Multiple Air Toxics Exposure Study (MATES)

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update to the MATES study (MATES III). The results showed that the overall basinwide risk for excess cancer from a lifetime of exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust accounting for 84 percent of the cancer risk (SCAQMD 2008a).

SCAQMD recently released the fourth update (MATES IV). The results showed that the overall monitored basinwide risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (SCAQMD 2015a).

The Office of Environmental Health Hazard Assessment updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods from MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

Air Quality Management Planning

SCAQMD is the agency responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2012 AQMP

On December 7, 2012, SCAQMD adopted the 2012 AQMP, which employs the most up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on- and off-road mobile sources, and area sources. It also addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models. The 2012 AQMP builds upon the approach identified in the 2007 AQMP for attainment of federal PM and ozone standards and highlights the significant amount of reductions needed. It also highlights the urgent need to engage in interagency coordinated planning to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria air pollutant standards within the time frames allowed under the CAA. The 2012 AQMP demonstrates attainment of federal 24-hour $PM_{2.5}$ standards by 2014 and the federal 8-hour ozone standard by 2023. Preliminary ambient air quality data suggests that meeting the 2016 federal 24-hour $PM_{2.5}$ standards by the end of 2014 is not likely, largely due to the extreme drought conditions in the SoCAB (SCAQMD 2016a). It includes an update to the revised EPA 8-hour ozone control plan with new commitments for short-term NO_X and VOC reductions. The plan also identifies emerging issues—ultrafine particulate matter ($PM_{1.0}$), near-roadway exposure, and energy supply and demand.

2016 Draft AQMP

The SCAQMD is in the process of updating the AQMP and released the Draft Final 2016 AQMP in December 2016 (SCAQMD 2016a) and anticipates adoption of the 2016 AQMP at the February 2017 Board hearing (SCAQMD 2017). The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031,
- 2012 National annual $PM_{2.5}$ standard by 2025[5],
- 2006 National 24-hour $PM_{2.5}$ standard by 2019,
- 1997 National 8-hour ozone standard by 2023, and the
- 1979 National 1-hour ozone standard by year 2022.

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (SCAQMD 2016a), which requires reducing NO_X emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations within the SoCAB. However, as the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, SCAQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" non-attainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (SCAQMD 2016b).

LEAD STATE IMPLEMENTATION PLAN

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

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[5] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National $PM_{2.5}$ standard.

- ***Unclassified.*** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment.*** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment.*** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- ***Nonattainment/Transitional.*** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 2.

Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM_{10}	Serious Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Serious Nonattainment[2]
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2015a.

[1] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

[2] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for this standard

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site are best documented by measurements taken by the SCAQMD. The project site is located within Source Receptor Area (SRA) 6 – West San Fernando Valley. The air quality monitoring station closest to the project site is the Reseda Monitoring Station. This station monitors O_3, CO, NO_2, and $PM_{2.5}$. Data for SO_2 and PM_{10} are supplemented by the Burbank – W Palm Avenue Monitoring Station. The most current five years of data monitored at these monitoring stations are included in Table 3. The data show recurring violations of the federal $PM_{2.5}$ standard, state PM_{10} standard, and both the state and federal O_3 standards. The CO, NO_2, and SO_2 standards and have not been violated in the last five years.

Table 3 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations 2011	2012	2013	2014	2015
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	17	18	7	6	11
State 8-hour ≥ 0.07 ppm (days exceed threshold)	35	39	21	31	34
Federal 8-Hour > 0.075 ppm (days exceed threshold)	26	23	11	11	15
Max. 1-Hour Conc. (ppm)	0.130	0.129	0.124	0.116	0.119
Max. 8-Hour Conc. (ppm)	0.103	0.098	0.092	0.092	0.094
Carbon Monoxide (CO)[1]					
State 8-Hour > 9.0 ppm (days exceed threshold)	0	0	*	*	*
Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)	0	0	*	*	*
Max. 8-Hour Conc. (ppm)	2.77	2.70	*	*	*
Nitrogen Dioxide (NO_2)[1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	0.0699	0.0709	0.0581	0.0589	0.0725
Sulfur Dioxide (SO_2)[2]					
State 24-Hour ≥ 0.04 ppm (days exceed threshold)	0	0	0	*	*
Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)	0	0	0	*	*
Max 24-Hour Conc. (ppm)	0.002	0.002	0.002	*	*
Coarse Particulates (PM_{10})[2]					
State 24-Hour > 50 μg/m^3 (days exceed threshold)	2	1	1	1	*
Federal 24-Hour > 150 μg/m^3 (days exceed threshold)	0	0	0	0	*
Max. 24-Hour Conc. (μg/m^3)	96.7	55.0	53.3	68.6	*
Fine Particulates ($PM_{2.5}$)[1]					
Federal 24-Hour > 35 μg/m^3 (days exceed threshold)	1	2	1	0	1
Max. 24-Hour Conc. (μg/m^3)	39.8	41.6	41.8	27.2	36.8

Source: CARB 2017a.
ppm: parts per million; parts per billion, μg/m^3: micrograms per cubic meter
Notes: * Data not available.
[1] Data obtained from the Reseda Monitoring Station.
[2] Data obtained from the Burbank – W Palm Avenue Monitoring Station.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The nearest sensitive receptors to the project site are the single family residences to the north across Victory Boulevard, to the south across Erwin Street, and to the west across Yolanda Avenue. Other nearby sensitive receptors also include the adjacent multi-family complexes and the Magic Years Nursery School to the east in addition to the Trieste Apartments across Reseda Boulevard.

Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.1, distributed by the California Air Pollutant Control Officers Association (CAPCOA). CalEEMod compiles an emissions inventory of construction(fugitive dust, off-gas emissions, onroad emissions, and offroad emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The calculated emissions of the project are compared to thresholds of significance for individual projects using the SCAQMD's CEQA Air Quality Analysis Guidance Handbook.

Thresholds of Significance

The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website.[6] CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

REGIONAL SIGNIFICANCE THRESHOLDS

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB, shown in Table 4. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. There is growing evidence that although UFPs contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA and CARB have not adopted AAQS to regulate UFPs; therefore, SCAQMD has not developed thresholds for them.

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[6] SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found here: http://www.aqmd.gov/ceqa/hdbk.html.

Table 4 SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: SCAQMD 2015b.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Contributes to lower birth weight in newborns ($PM_{2.5}$) (SCAQMD 2015c)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists, in a landmark children's health study, found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (SCAQMD 2015d).

Mass emissions in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact, and it is speculative to identify how many more individuals in the air basin would be affected by the health effects listed above. In addition, the analysis to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment is within the scope of the AQMP. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD prepares an AQMP that details regional programs to attain the AAQS.

CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. Typically, for an intersection to exhibit a significant CO concentration, it would operate at level of service (LOS) E or worse without improvements (Caltrans 1997). However, at the time of the 1993 Handbook, the SoCAB was designated nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by SCAQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.[7] As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011).

LOCALIZED SIGNIFICANCE THRESHOLDS

SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at the project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 5.

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[7] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

Table 5 SCAQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (SCAQMD)[1]	10.4 μg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (SCAQMD)[1]	10.4 μg/m^3
24-Hour PM_{10} Standard – Operation (SCAQMD)[1]	2.5 μg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (SCAQMD)[1]	2.5 μg/m^3

Source: SCAQMD 2015b.
ppm – parts per million; μg/m^3 – micrograms per cubic meter
[1] Threshold is based on SCAQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, SCAQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the project to the localized concentrations shown in Table 5.

LST analysis for construction is applicable to all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. In accordance with SCAQMD's LST methodology, construction LSTs are based on the acreage disturbed per day based on equipment use. The construction LSTs for the project site in SRA 6 are shown in Table 6 for receptors within 82 feet (25 meters).

Table 6 SCAQMD Construction Localized Significance Thresholds

	Threshold (lbs/day)[1]			
Acreage Disturbed	Nitrogen Oxides (NO_X)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
≤1.00 Acre Disturbed Per Day	103	426	4	3

Source: SCAQMD 2008b & 2011, Based on receptors in SRA 6.
[1] LSTs are based on receptors within 82 feet (25 meters) for an area disturbed of 1 acre or less.

HEALTH RISK THRESHOLDS

Whenever a project would require use of chemical compounds that have been identified in SCAQMD Rule 1401, placed on CARB's air toxics list pursuant to AB 1807, or placed on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 8 lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the proposed project on the environment, not the significant effects of the environment on the proposed project. (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). CEQA does not require an EIR to analyze the environmental effects of attracting development and people to an area. However, the EIR must analyze the impacts of environmental hazards on future users, when the proposed project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

Table 8 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases

Source: SCAQMD 2015b.

GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,[8] carbon (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[9] The major GHG are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.

- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.

  - ***Chlorofluorocarbons (CFCs***) are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-

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[8] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop o rather than a primary cause of change.

[9] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2014). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

- ***Perfluorocarbons (PFCs)*** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF_4] and perfluoroethane [C_2F_6]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.

- ***Sulfur Hexafluoride (SF_6)*** is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF_6 is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.

- ***Hydrochlorofluorocarbons (HCFCs)*** contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.

- ***Hydrofluorocarbons (HFCs)*** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; USEPA 2015).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 9. The GWP is used to convert GHGs to CO_2-equivalent (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Second Assessment Report GWP values for CH_4, a project that generates 10 metric tons (MT) of CH_4 would be equivalent to 210 MT of CO_2.[10]

Table 9 GHG Emissions and their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
Carbon Dioxide (CO_2)	50 to 200	50 to 200	1	1
Methane[2] (CH_4)	12 (±3)	12	21	25
Nitrous Oxide (N_2O)	120	114	310	298
Hydrofluorocarbons:				
HFC-23	264	270	11,700	14,800
HFC-32	5.6	4.9	650	675
HFC-125	32.6	29	2,800	3,500

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[10] CO_2-equivalence is used to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. The global warming potential of a GHG is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere.

Table 9 GHG Emissions and their Relative Global Warming Potential Compared to CO_2

GHGs	Second Assessment Report Atmospheric Lifetime (Years)	Fourth Assessment Report Atmospheric Lifetime (Years)	Second Assessment Report Global Warming Potential Relative to CO_2[1]	Fourth Assessment Report Global Warming Potential Relative to CO_2[1]
HFC-134a	14.6	14	1,300	1,430
HFC-143a	48.3	52	3,800	4,470
HFC-152a	1.5	1.4	140	124
HFC-227ea	36.5	34.2	2,900	3,220
HFC-236fa	209	240	6,300	9,810
HFC-4310mee	17.1	15.9	1,300	1,030
Perfluoromethane: CF_4	50,000	50,000	6,500	7,390
Perfluoroethane: C_2F_6	10,000	10,000	9,200	12,200
Perfluorobutane: C_4F_{10}	2,600	NA	7,000	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	NA	7,400	9,300
Sulfur Hexafluoride (SF_6)	3,200	NA	23,900	22,800

Source: IPCC 1996 and IPCC 2007.

Notes: The IPCC has published updated global warming potential (GWP) values in its Fifth Assessment Report (2013) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO_2. However, GWP values identified in the Fourth Assessment Report are used by SCAQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2014 Scoping Plan Update was based on the GWP values in the Fourth Assessment Report.

[1] Based on 100-year time horizon of the GWP of the air pollutant relative to CO_2.

[2] The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.

GREENHOUSE GAS EMISSIONS REGULATORY FRAMEWORK

REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The U.S. Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements, but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

The EPA's endangerment finding covers emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world (the first three are applicable to the proposed project).

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 metric tons (MT) or more of CO_2 per year are required to submit an annual report.

US Mandatory Report Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2 per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy (CAFE) standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon [mpg] by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017–2025, which will require a fleet average of 54.5 mpg in 2025.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new stationary sources such as power plants, refineries, and other large sources of emissions. Pursuant to the President's 2013 Climate Action Plan, the EPA will be directed to also develop regulations for existing stationary sources.

REGULATION OF GHG EMISSIONS ON A STATE LEVEL

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05, Executive Order B-30-15, Assembly Bill 32, and Senate Bill 375.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005. Executive Order S-03-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The 2008 Scoping Plan was adopted by CARB on December 11, 2008. The *2008 Scoping Plan* identified that GHG emissions in California are anticipated to be approximately 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB

2008). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated GWPs in the Fourth Assessment Report, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 32 and Assembly Bill 197

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direct emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan Update

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On January 20, 2017, CARB released the *Draft 2017 Climate Change Scoping Plan Update* with adoption hearings planned for April of 2017. The *Draft 2017 Climate Change Scoping Plan Update* includes the potential regulations and programs including strategies consistent with AB 197 requirements to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 MMTCO$_2$e for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030);
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030;
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks;
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030;
- Continued implementation of SB 375;
- Post-2020 Cap-and-Trade Program that includes declining caps;

- 20 percent reduction in GHG emissions from refineries by 2030[11]; and
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the *2017 Climate Change Scoping Plan* also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate (CARB 2017b).

The Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit. It includes the existing renewables requirements, advanced clean cars, the "10 percent" Low Carbon Fuel Standard (LCFS), and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Table 10. Also shown in the table, the known commitments are expected to result in emissions that are 50 $MMTCO_2e$ above the target in 2030. In order to make up the "gap", a new Post- 2020 Cap-and-Trade Program and refinery measure are key components of the 2017 Scoping Plan.

Table 10 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	392.4
With Known Commitments	310
2030 GHG Target	360

Source: CARB 2017b

Table 11 provides estimated GHG emissions by sector, compared to 1990 levels, and the range of GHG emissions for each sector estimated for 2030.

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[11] The plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources in accordance with AB 197. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade Program, which constrains and reduces emissions at covered sources.

Table 11 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-4% to -8%
Residential and Commercial	44	38-40	-9% to -14%
Electric Power	108	42-62	-43% to -61%
High GWP	3	8-11	167% to 267%
Industrial	98	77-87	-11% to -21%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-27% to -32%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	300-345	-20% to -30%
Cap-and-Trade Program	NA	40-85	NA
Total	431	260	-40%

Source: CARB 2017b
Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH_4. Black carbon is the light-absorbing component of fine particulate matter (PM) produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030, as specified. The bill also establishes targets for reducing organic waste in landfill. In April 2016, CARB adopted the *Proposed Short-Lived Climate Pollutant Strategy*, which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2016c). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. SCAQMD is one of the air districts that require air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these charbroilers by over 80 percent (CARB 2016c). Additionally, SCAQMD Rule 445, wood-burning devices limits installation of new fireplaces in the SoCAB.

Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010a). SB 375 requires CARB to periodically update the targets, no later than every eight years. CARB plans to propose updated targets for consideration in 2016, with the intent to make them effective in 2018. Sustainable communities strategies (SCSs) adopted in 2018 would be subject to the updated targets (CARB 2015b).

The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by 2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

CARB is currently in the process of updating the next round of targets and methodology to comply with the requirement for updates every eight years. Considerations for the next round of targets include whether to change the nature or magnitude of the emissions reduction targets for each of the MPOs, and whether the target-setting methodology should account for advances in technologies that reduce emissions. Such changes in methodology would permit cities to account for emissions reductions from advances in cleaner fuels and vehicles and not only from land use and transportation planning strategies.

SCAG's 2016-2040 RTP/SCS

SB 375 requires the MPOs to prepare a sustainable communities strategy in their regional transportation plan. For the SCAG region, the 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was adopted on April 7, 2016, and is an update to the 2012 RTP/SCS (SCAG 2016). In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

The 2016-2040 RTP/SCS projects that the SCAG region will meet or exceed the passenger per capita targets set in 2010 by CARB. It is projected that VMT per capita in the region for year 2040 would be reduced by 7.4 percent with implementation of the 2016-2040 RTP/SCS compared to a no-plan year 2040 scenario. Under the 2016-2040 RTP/SCS, SCAG anticipates lowering GHG emissions 8 percent below 2005 levels by 2020, 18 percent by 2035, and 21 percent by 2040. The 18 percent reduction by 2035 over 2005 levels represents a 2 percent increase in reduction compared to the 2012 RTP/SCS projection. Overall, the SCS is meant to provide growth strategies that will achieve the aforementioned regional GHG emissions reduction targets.

Land use strategies to achieve the region's targets include planning for new growth around high quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles (SCAG 2016). However, the SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS; instead, it provides incentives to governments and developers for consistency.

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards under *Federal Laws*, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

Executive Order S-01-07

On January 18, 2007, the state set a new low carbon fuel standard (LCFS) for transportation fuels sold within the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Senate Bills 1078 and 107, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard (RPS) established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expands the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SBX1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects, because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. On June 10, 2015, the CEC adopted the 2016 Building Energy Efficiency Standards, which went into effect on January 1, 2017.

The 2016 Standards continues to improve upon the previous 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Under the 2016 Standards, residential and nonresidential buildings are 28 and 5 percent more energy efficient than the 2013 Standards, respectively (CEC 2015a). Buildings that are constructed in accordance with the 2013 Building Energy Efficiency Standards are 25 percent (residential) to 30 percent (nonresidential) more energy efficient than the prior 2008 standards as a result of better windows, insulation, lighting, ventilation systems, and other features. While the 2016 standards do not achieve zero net energy, they do get very close to the state's goal and make important steps toward changing residential building practices in California. The 2019 standards will take the final step to achieve zero net energy for newly constructed residential buildings throughout California (CEC 2015b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[12] The mandatory provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2016. The 2016 Standards became effective on January 1, 2017.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

Solid Waste Regulations

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

The California Solid Waste Reuse and Recycling Access Act (AB 1327, California Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

Section 5.408 of the 2013 CALGreen also requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

In October of 2014 Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

Water Efficiency Regulations

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and

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[12] The green building standards became mandatory in the 2010 edition of the building code.

therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

Thresholds of Significance

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[13]

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

SCAQMD has adopted a significance threshold of 10,000 $MTCO_2e$ per year for permitted (stationary) sources of GHG emissions for which SCAQMD is the designated lead agency. To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, SCAQMD identified a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency (SCAQMD 2010):

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.

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[13] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.

- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

The SCAQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.[14] The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[15]

Project-related GHG emissions include on-road transportation, energy use, water use and wastewater generation, solid waste disposal, area sources, off-road emissions, and construction activities. The SCAQMD Working Group identified that because construction activities would result in a "one-time" net increase in GHG emissions, construction activities should be amortized into the operational phase GHG emissions inventory based on the service life of a building. For buildings, in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation. Life cycle emissions are not included in this analysis because not enough information is available for the proposed project, and therefore life cycle GHG emissions would be speculative.[16] Black carbon emissions are not

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[14] It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this meeting.

[15] SCAQMD took the 2020 statewide GHG reduction target for land use only GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

[16] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

included in the GHG analysis because CARB does not include this pollutant in the state's AB 32 inventory and treats this short-lived climate pollutant separately.[17]

Life cycle emissions are not included in the analysis because not enough information is available for the proposed project, and therefore life cycle GHG emissions would be speculative.[18] Black carbon emissions are not included in the GHG analysis because CARB does not include this pollutant in the state's AB 32 inventory and treats this short-lived climate pollutant separately.

For the purpose of this project, SCAQMD's project-level thresholds are used. If projects exceed the bright line and per capita efficiency targets, GHG emissions would be considered potentially significant in the absence of mitigation measures.

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[17] Particulate matter emissions, which include black carbon, are analyzed in Section 5.2, *Air Quality*. Black carbon emissions have sharply declined due to efforts to reduce on-road and off-road vehicle emissions, especially diesel particulate matter. The State's existing air quality policies will virtually eliminate black carbon emissions from on-road diesel engines within 10 years (CARB 2016c).

[18] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analyses was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials are also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

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Regional Construction Emissions Worksheet: Phase 1

Asphalt Demolition

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2018**						
	Fugitive Dust		0	0	0	0	0.3056	0.0463
	Off-Road		3.4778	25.9019	25.1496	0.0393	1.7935	1.7618
	Total		**3.4778**	**25.9019**	**25.1496**	**0.0393**	**2.099**	**1.8081**
Offsite								
	Hauling		0.0538	1.731	0.378	0.00428	0.1506	0.0443
	Vendor		0.00959	0.2457	0.0737	0.00053	0.0137	0.00516
	Worker		0.1223	0.0923	1.0802	0.00252	0.2081	0.0568
	Total		**0.1857**	**2.069**	**1.5005**	**0.00733**	**0.3724**	**0.1063**
TOTAL			***3.6635***	***27.9709***	***26.6501***	***0.0466***	***2.4714***	***1.9144***

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Fugitive Dust		0	0	0	0	0.3056	0.0463
	Off-Road		3.1093	23.4725	24.9826	0.0393	1.5258	1.4988
	Total		**3.1093**	**23.4725**	**24.9826**	**0.0393**	**1.8313**	**1.5451**
Offsite								
	Hauling		0.0509	1.6405	0.3685	0.00422	0.1621	0.0468
	Vendor		0.00867	0.2318	0.0677	0.00052	0.0135	0.00492
	Worker		0.1108	0.0813	0.9643	0.00244	0.208	0.0568
	Total		**0.1703**	**1.9536**	**1.3709**	**0.00718**	**0.3836**	**0.1084**
TOTAL			***3.2796***	***25.4261***	***26.3535***	***0.0465***	***2.2149***	***1.6535***

Site Preparation

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Fugitive Dust		0	0	0	0	0.0118	0.00179
	Off-Road		1.6539	16.007	14.5327	0.0205	1.042	0.9594
	Total		**1.6539**	**16.007**	**14.5327**	**0.0205**	**1.0538**	**0.9612**
Offsite								
	Hauling		0.3371	10.863	2.44	0.028	0.6104	0.1959
	Vendor		0.00867	0.2318	0.0677	0.00052	0.0135	0.00492
	Worker		0.0997	0.0732	0.8679	0.00219	0.1872	0.0511
	Total		**0.4455**	**11.1679**	**3.3042**	**0.0307**	**0.811**	**0.2519**
TOTAL			***2.0994***	***27.1749***	***17.8369***	***0.0512***	***1.8648***	***1.2131***

Building Construction

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Off-Road		2.9382	29.895	25.9386	0.0492	1.4827	1.4026
	Total		**2.9382**	**29.895**	**25.9386**	**0.0492**	**1.4827**	**1.4026**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.1084	2.8971	0.8462	0.00653	0.1685	0.0615
	Worker		0.2049	0.1504	1.784	0.00451	0.3848	0.105
	Total		**0.3133**	**3.0476**	**2.5517**	**0.011**	**0.5533**	**0.1665**
TOTAL			***3.2515***	***32.9426***	***28.4903***	***0.0602***	***2.0360***	***1.5691***

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Off-Road		2.7237	27.659	25.6897	0.0493	1.3061	1.2357
	Total		**2.7237**	**27.659**	**25.6897**	**0.0493**	**1.3061**	**1.2357**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.093	2.6593	0.7685	0.00649	0.1625	0.0557
	Worker		0.1891	0.1341	1.62	0.00437	0.3847	0.1049
	Total		**0.282**	**2.7929**	**2.3168**	**0.0109**	**0.5472**	**0.1607**
TOTAL			***3.0057***	***30.4519***	***28.0065***	***0.0602***	***1.8533***	***1.3964***

Temporary Portables Installation

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2019**						
	Off-Road		0.504	6.007	2.293	0.00577	0.2546	0.2343
	Total		**0.504**	**6.007**	**2.293**	**0.00577**	**0.2546**	**0.2343**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.00867	0.2318	0.0677	0.00052	0.0135	0.00492
	Worker		0.0166	0.0122	0.1447	0.00037	0.0312	0.00852
	Total		**0.0253**	**0.244**	**0.2061**	**0.00089**	**0.0447**	**0.0134**
TOTAL			***0.5293***	***6.2510***	***2.4991***	***0.0067***	***0.2993***	***0.2477***

Building Construction and Temporary Portables Install	***3.7808***	***39.1936***	***30.9894***	***0.0669***	***2.3353***	***1.8168***

Architectural Coating

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Archit. Coating		15.0204	0	0	0	0	0
	Off-Road		0.2422	1.6838	1.8314	0.00297	0.1109	0.1109
	Total		**15.2625**	**1.6838**	**1.8314**	**0.00297**	**0.1109**	**0.1109**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0	0	0
	Worker		0.0358	0.0254	0.3065	0.00083	0.0728	0.0199
	Total		**0.0358**	**0.0254**	**0.3065**	**0.00083**	**0.0728**	**0.0199**
TOTAL			***15.2983***	***1.7092***	***2.1379***	***0.0038***	***0.1837***	***0.1308***

Building Construction and Architectural Coating	***18.3040***	***32.1611***	***30.1444***	***0.0640***	***2.0370***	***1.5272***

Paving

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Off-Road		1.3599	12.0472	11.8187	0.0192	0.65	0.6072
	Paving		0.025	0	0	0	0	0
	Total		**1.3849**	**12.0472**	**11.8187**	**0.0192**	**0.65**	**0.6072**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0669	1.9147	0.5533	0.00467	0.117	0.0401
	Worker		0.1533	0.1087	1.3135	0.00354	0.3119	0.0851
	Total		**0.2202**	**2.0231**	**1.8152**	**0.00821**	**0.4289**	**0.1252**
TOTAL			***1.6051***	***14.0703***	***13.6339***	***0.0274***	***1.0789***	***0.7324***

Temporary Portables Removal

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Fugitive Dust		0	0	0	0	0	0
	Off-Road		0.4534	5.3915	2.1154	0.00577	0.2223	0.2045
	Total		**0.4534**	**5.3915**	**2.1154**	**0.00577**	**0.2223**	**0.2045**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0112	0.3191	0.0922	0.00078	0.0195	0.00669
	Worker		0.0153	0.0109	0.1314	0.00035	0.0312	0.00851
	Total		**0.0265**	**0.3299**	**0.215**	**0.00113**	**0.0507**	**0.0152**
TOTAL			***0.4799***	***5.7214***	***2.3304***	***0.0069***	***0.2730***	***0.2197***

Building Demolition

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Fugitive Dust		0	0	0	0	0.8516	0.1289
	Off-Road		2.9691	22.5106	25.7678	0.0404	1.4016	1.3709
	Total		**2.9691**	**22.5106**	**25.7678**	**0.0404**	**2.2531**	**1.4999**
Offsite								
	Hauling		0.1318	4.2895	0.9973	0.0116	0.2537	0.0794
	Vendor		0.00744	0.2127	0.0615	0.00052	0.013	0.00446
	Worker		0.1022	0.0725	0.8757	0.00236	0.2079	0.0567
	Total		**0.2414**	**4.5747**	**1.8698**	**0.0145**	**0.4746**	**0.1406**
TOTAL			***3.2105***	***27.0853***	***27.6376***	***0.0549***	***2.7277***	***1.6405***

MAX DAILY	**18.30**	**39.19**	**30.99**	**0.07**	**2.73**	**1.91**
Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

Localized Construction Emissions Worksheet: Phase 1

Asphalt Demolition

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2018**				
	Fugitive Dust	0	0	0.3056	0.0463
	Off-Road	25.9019	25.1496	1.7935	1.7618
	Total	**25.9019**	**25.1496**	**2.099**	**1.8081**
TOTAL		***25.9019***	***25.1496***	***2.0990***	***1.8081***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2019**				
	Fugitive Dust	0	0	0.3056	0.0463
	Off-Road	23.4725	24.9826	1.5258	1.4988
	Total	**23.4725**	**24.9826**	**1.8313**	**1.5451**
TOTAL		***23.4725***	***24.9826***	***1.8313***	***1.5451***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Site Preparation

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2019**				
	Fugitive Dust	0	0	0.0118	0.00179
	Off-Road	16.007	14.5327	1.042	0.9594
	Total	**16.007**	**14.5327**	**1.0538**	**0.9612**
TOTAL		***16.0070***	***14.5327***	***1.0538***	***0.9612***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Building Construction

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2019**				
	Off-Road	29.895	25.9386	1.4827	1.4026
	Total	**29.895**	**25.9386**	**1.4827**	**1.4026**
TOTAL		***29.8950***	***25.9386***	***1.4827***	***1.4026***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Off-Road	27.659	25.6897	1.3061	1.2357
	Total	**27.659**	**25.6897**	**1.3061**	**1.2357**
TOTAL		***27.6590***	***25.6897***	***1.3061***	***1.2357***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Temporary Portables Installation

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2019**				
	Off-Road	6.007	2.293	0.2546	0.2343
	Total	**6.007**	**2.293**	**0.2546**	**0.2343**
TOTAL		***6.0070***	***2.2930***	***0.2546***	***0.2343***
Building Construction and Temporary Portables Install		***35.9020***	***28.2316***	***1.7373***	***1.6369***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Architectural Coating

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Archit. Coating	0	0	0	0
	Off-Road	1.6838	1.8314	0.1109	0.1109
	Total	**1.6838**	**1.8314**	**0.1109**	**0.1109**
TOTAL		***1.6838***	***1.8314***	***0.1109***	***0.1109***
Building Construction and Architectural Coating		***29.3428***	***27.5211***	***1.4170***	***1.3466***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Paving

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Off-Road	12.0472	11.8187	0.65	0.6072
	Paving	0	0	0	0
	Total	**12.0472**	**11.8187**	**0.65**	**0.6072**
TOTAL		***12.0472***	***11.8187***	***0.6500***	***0.6072***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Temporary Portables Removal

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2020				
	Fugitive Dust	0	0	0	0
	Off-Road	5.3915	2.1154	0.2223	0.2045
	Total	**5.3915**	**2.1154**	**0.2223**	**0.2045**
TOTAL		***5.3915***	***2.1154***	***0.2223***	***0.2045***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Building Demolition

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	2020				
	Fugitive Dust	0	0	0.8516	0.1289
	Off-Road	22.5106	25.7678	1.4016	1.3709
	Total	**22.5106**	**25.7678**	**2.2531**	**1.4999**
TOTAL		***22.5106***	***25.7678***	***2.2531***	***1.4999***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Regional Construction Emissions Worksheet: Phase 2

Site Preparation

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Fugitive Dust		0	0	0	0	0.0116	0.00175
	Off-Road		1.5401	14.8331	14.4608	0.0205	0.9425	0.8679
	Total		**1.5401**	**14.8331**	**14.4608**	**0.0205**	**0.9541**	**0.8696**
Offsite								
	Hauling		0.3062	9.9677	2.3174	0.027	0.5895	0.1845
	Vendor		0.00744	0.2127	0.0615	0.00052	0.013	0.00446
	Worker		0.092	0.0652	0.7881	0.00213	0.1871	0.051
	Total		**0.4056**	**10.2456**	**3.1007**	**0.0297**	**0.7897**	**0.24**
TOTAL			***1.9457***	***25.0787***	***17.5615***	***0.0502***	***1.7438***	***1.1096***

Building Construction HS

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2020**						
	Off-Road		2.7237	27.659	25.6897	0.0493	1.3061	1.2357
	Total		**2.7237**	**27.659**	**25.6897**	**0.0493**	**1.3061**	**1.2357**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0781	2.2338	0.6455	0.00545	0.1365	0.0468
	Worker		0.138	0.0979	1.1822	0.00319	0.2807	0.0766
	Total		**0.2161**	**2.3312**	**1.7675**	**0.00864**	**0.4172**	**0.1234**
TOTAL			***2.9398***	***29.9902***	***27.4572***	***0.0579***	***1.7233***	***1.3591***

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2021**						
	Off-Road		2.5045	25.1995	25.4597	0.0493	1.1366	1.0756
	Total		**2.5045**	**25.1995**	**25.4597**	**0.0493**	**1.1366**	**1.0756**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.067	2.0389	0.5896	0.0054	0.1301	0.0407
	Worker		0.1287	0.0881	1.0875	0.00309	0.2806	0.0765
	Total		**0.1958**	**2.1227**	**1.6205**	**0.00849**	**0.4108**	**0.1172**
TOTAL			***2.7003***	***27.3222***	***27.0802***	***0.0578***	***1.5474***	***1.1928***

Architectural Coating HS

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2021**						
	Archit. Coating		18.6074	0	0	0	0	0
	Off-Road		0.2189	1.5268	1.8176	0.00297	0.0941	0.0941
	Total		**18.8263**	**1.5268**	**1.8176**	**0.00297**	**0.0941**	**0.0941**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0	0	0	0	0	0
	Worker		0.0238	0.0163	0.2014	0.00057	0.052	0.0142
	Total		**0.0238**	**0.0163**	**0.2014**	**0.00057**	**0.052**	**0.0142**
TOTAL			***18.8501***	***1.5431***	***2.0190***	***0.0035***	***0.1461***	***0.1083***
Building Construction HS and Architectural Coating HS			***21.5504***	***28.8653***	***29.0992***	***0.0613***	***1.6935***	***1.3011***

Demolition

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Fugitive Dust	0	0	0	0	0.1208	0.0183
	Off-Road	2.6111	19.598	24.7722	0.0393	1.1318	1.1113
	Total	**2.6111**	**19.598**	**24.7722**	**0.0393**	**1.2525**	**1.1295**
Offsite							
	Hauling	0.0178	0.5672	0.1393	0.00163	0.0358	0.0111
	Vendor	0.00638	0.1942	0.0562	0.00051	0.0124	0.00388
	Worker	0.0954	0.0652	0.8056	0.00229	0.2079	0.0567
	Total	**0.1196**	**0.8262**	**0.9877**	**0.00443**	**0.2561**	**0.0716**
TOTAL		***2.7307***	***20.4242***	***25.7599***	***0.0437***	***1.5086***	***1.2011***

Building Construction ES

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Off-Road	2.5045	25.1995	25.4597	0.0493	1.1366	1.0756
	Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**	**1.1366**	**1.0756**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.067	2.0389	0.5896	0.0054	0.1301	0.0407
	Worker	0.1287	0.0881	1.0875	0.00309	0.2806	0.0765
	Total	**0.1958**	**2.1227**	**1.6205**	**0.00849**	**0.4108**	**0.1172**
TOTAL		***2.7003***	***27.3222***	***27.0802***	***0.0578***	***1.5474***	***1.1928***

Architectural Coating ES

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Archit. Coating	8.3866	0	0	0	0	0
	Off-Road	0.2189	1.5268	1.8176	0.00297	0.0941	0.0941
	Total	**8.6055**	**1.5268**	**1.8176**	**0.00297**	**0.0941**	**0.0941**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0	0	0	0	0	0
	Worker	0.0238	0.0163	0.2014	0.00057	0.052	0.0142
	Total	**0.0238**	**0.0163**	**0.2014**	**0.00057**	**0.052**	**0.0142**
TOTAL		***8.6293***	***1.5431***	***2.0190***	***0.0035***	***0.1461***	***0.1083***
Building Construction ES and Architectural Coating ES		***11.3296***	***28.8653***	***29.0992***	***0.0613***	***1.6935***	***1.3011***

Temporary Portables Removal

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2021**						
	Fugitive Dust	0	0	0	0	0	0
	Off-Road	0.4102	4.8176	1.9699	0.00573	0.1956	0.18
	Total	**0.4102**	**4.8176**	**1.9699**	**0.00573**	**0.1956**	**0.18**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0223	0.6796	0.1965	0.0018	0.0434	0.0136
	Worker	0.0143	0.00978	0.1208	0.00034	0.0312	0.0085
	Total	**0.0366**	**0.6885**	**0.307**	**0.00214**	**0.0746**	**0.0221**
TOTAL		***0.4468***	***5.5061***	***2.2769***	***0.0079***	***0.2702***	***0.2021***

Paving

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2021**						
	Off-Road		1.2803	11.2564	11.7726	0.0192	0.5811	0.5438
	Paving		0	0	0	0	0	0
	Total		**1.2803**	**11.2564**	**11.7726**	**0.0192**	**0.5811**	**0.5438**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0574	1.7476	0.5054	0.00463	0.1115	0.0349
	Worker		0.1431	0.0978	1.2083	0.00343	0.3118	0.085
	Total		**0.2005**	**1.8418**	**1.6652**	**0.00806**	**0.4233**	**0.1199**
TOTAL			***1.4808***	***13.0982***	***13.4378***	***0.0273***	***1.0044***	***0.6637***

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2022**						
	Off-Road		1.1727	10.1215	11.6877	0.0192	0.4939	0.4636
	Paving		0	0	0	0	0	0
	Total		**1.1727**	**10.1215**	**11.6877**	**0.0192**	**0.4939**	**0.4636**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0539	1.6619	0.4784	0.00458	0.1111	0.0345
	Worker		0.1344	0.0884	1.1148	0.00331	0.3117	0.0849
	Total		**0.1883**	**1.7458**	**1.5471**	**0.00789**	**0.4228**	**0.1194**
TOTAL			***1.3610***	***11.8673***	***13.2348***	***0.0271***	***0.9167***	***0.5830***

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
MAX DAILY	**21.55**	**29.99**	**29.10**	**0.06**	**1.74**	**1.36**
Regional Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

Localized Construction Emissions Worksheet: Phase 2

Site Preparation

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Fugitive Dust	0	0	0.0116	0.00175
	Off-Road	14.8331	14.4608	0.9425	0.8679
	Total	**14.8331**	**14.4608**	**0.9541**	**0.8696**
TOTAL		***14.8331***	***14.4608***	***0.9541***	***0.8696***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Building Construction HS

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2020**				
	Off-Road	27.659	25.6897	1.3061	1.2357
	Total	**27.659**	**25.6897**	**1.3061**	**1.2357**
TOTAL		***27.6590***	***25.6897***	***1.3061***	***1.2357***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Off-Road	25.1995	25.4597	1.1366	1.0756
	Total	**25.1995**	**25.4597**	**1.1366**	**1.0756**
TOTAL		***25.1995***	***25.4597***	***1.1366***	***1.0756***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Architectural Coating HS

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Archit. Coating	0	0	0	0
	Off-Road	1.5268	1.8176	0.0941	0.0941
	Total	**1.5268**	**1.8176**	**0.0941**	**0.0941**
TOTAL		***1.5268***	***1.8176***	***0.0941***	***0.0941***
Building Construction HS and Architectural Coating HS		***26.7263***	***27.2773***	***1.2307***	***1.1697***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Demolition

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Fugitive Dust	0	0	0.1208	0.0183
	Off-Road	19.598	24.7722	1.1318	1.1113
	Total	**19.598**	**24.7722**	**1.2525**	**1.1295**
TOTAL		***19.5980***	***24.7722***	***1.2525***	***1.1295***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Building Construction ES

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Off-Road	25.1995	25.4597	1.1366	1.0756
	Total	**25.1995**	**25.4597**	**1.1366**	**1.0756**
TOTAL		***25.1995***	***25.4597***	***1.1366***	***1.0756***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Architectural Coating ES

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Archit. Coating	0	0	0	0
	Off-Road	1.5268	1.8176	0.0941	0.0941
	Total	**1.5268**	**1.8176**	**0.0941**	**0.0941**
TOTAL		***1.5268***	***1.8176***	***0.0941***	***0.0941***
Building Construction ES and Architectural Coating ES		***26.7263***	***27.2773***	***1.2307***	***1.1697***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Temporary Portables Removal

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Fugitive Dust	0	0	0	0
	Off-Road	4.8176	1.9699	0.1956	0.18
	Total	**4.8176**	**1.9699**	**0.1956**	**0.18**
TOTAL		***4.8176***	***1.9699***	***0.1956***	***0.1800***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

Paving

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2021**				
	Off-Road	11.2564	11.7726	0.5811	0.5438
	Paving	0	0	0	0
	Total	**11.2564**	**11.7726**	**0.5811**	**0.5438**
TOTAL		***11.2564***	***11.7726***	***0.5811***	***0.5438***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2022**				
	Off-Road	10.1215	11.6877	0.4939	0.4636
	Paving	0	0	0	0
	Total	**10.1215**	**11.6877**	**0.4939**	**0.4636**
TOTAL		***10.1215***	***11.6877***	***0.4939***	***0.4636***
	<=1-Acre LSTs	***103***	***426***	***4***	***3***
	Exceeds LSTs?	***No***	***No***	***No***	***No***

GHG Emissions Inventory

Proposed Project Buildout

	$MTCO_2e$ Total*	
2018	23	
2019	692	
2020	541	
2021	591	
2022	23	
Total Construction	**1,870**	
Amortized Construction Emissions**	**62**	$MTCO_2e$/Year
SCAQMD Bright-Line Screening Threshold	3,000	$MTCO_2e$/Year
Exceed Threshold?	**No**	

* $MTCO_2e$=metric tons of carbon dioxide equivalent.

** Total construction emissions are amortized over 30 years per SCAQMD methodology; SCAQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

CalEEMod Land Use Inputs: Proposed Project

Type	Land Use Type	Land Use Unit Amount	Land Use Size Metric	Lot Acreage	Land Use Square Feet
Phase 1					
Education	High School	70.75	1000bsf	21.09	70,754
Parking	Parking Lot	45	space	0.41	18,000
				21.50	
Phase 2					
Education	High School	44.16	1000bsf	21.04	44,160
Education	Elementary	19.903	1000bsf	0.46	19,903
				21.50	

Project Location:	Los Angeles County
Climate Zone:	12
Operation Year	2022
Land Use Setting	Urban
Utility Company	LADWP
Source Receptor Area:	6 - West San Fernando Valley

New Land Uses/Development*

Total Project Site Area: 21.50 acres

Proposed Land Uses		
Phase 1		
Gym	*40,573*	building square feet (BSF)
Southeast Surface Parking Restriping:	45	stalls
Phase 2		
Classroom 2-story	*40,503*	BSF
Lunch/Food Shelter	*3,567*	BSF
Admin Addition	*90*	BSF
HS SubTotal	***44,160***	**BSF (gross total)**
Elementary	*19,903*	BSF
Total	***64,063***	**BSF**

**Based in information provided by the District.*

Renovation/Modernization*

Total Project Site Area: 21.50 acres

Proposed Land Uses	
Phase 1	
Administration Building	*3,138*
Auditorium	*15,365*
Counseling Building	*4,874*
Building D	*700*
Building E	*924*
Building K	*4,249*

Building L	*931*	
Total	*30,181*	

**Based in information provided by the District.*

Demolition

Phase 1		
Asphalt		
*Asphalt to be demolished:**	701.4	tons
Asphalt debris to be hauled offiste:	701.4	tons
1-way haul distance	20.0	miles (CalEEMod default)
*Haul truck capacity***	12.64	tons
*Haul Duration****	21	days
Total Haul Trips	111	trip ends
Daily Haul Trips	5	trip ends/day

**Based on measurement using Google Earth of areas anticipated to be demolished.*
***Based on 10 CY capacity haul truck per District and conversion factor of 1.2641662 tons/CY per CalEEMod methodology.*
****Based on information provided by District.*

Building		
Building Amount Demolition Volume:	44,519	building square feet
Building #5	2,156	
Building #7	6,046	
Building #9	5,416	
Building #10	3,258	
Gymnasium	24,076	
Lunch Shelter	3,567	
Building Demolition Debris Amount:*	**2,048**	**tons**
1-way haul distance	20.0	miles (CalEEMod default)
*Haul truck capacity***	12.64	tons
*Haul Duration****	22	days
Total Haul Trips	324	trip ends
Daily Haul Trips	15	trip ends/day
Total Haul Amount	2,749	tons
Total Haul Trips	434	trip ends (CalEEMod Default)
1-way haul distance	20	miles (CalEEMod Default)
Haul truck capacity	12.64	tons

**Based on CalEEMod conversion factor of 0.046 ton per square feet of building material.*
***Based on 10 CY capacity haul truck per District and conversion factor of 1.2641662 tons/CY per CalEEMod methodology.*
****Based on information provided by District.*

Phase 2

Asphalt

*Asphalt to be demolished:**	90.6	tons
Asphalt debris to be hauled offiste:	90.6	tons

**Based on measurement using Google Earth of areas anticipated to be demolished.*

Building

*Building Amount Demolition Volume:**	10,945	BSF
Building #30	1,833	BSF
Building #31	1,728	BSF
Building #33	1,792	BSF
Building #34	1,792	BSF
Building #35	1,900	BSF
Building #36	950	BSF
Building #37	950	BSF
Building Demolition Debris Amount:*	**503**	**tons**
Total Haul Amount	594	tons
Total Haul Trips	94	trip ends (CalEEMod Default)
1-way haul distance	20	miles (CalEEMod Default)
*Haul truck capacity****	12.64	tons (CalEEMod default)

**Based on information provided by District.*

***Based on CalEEMod conversion factor of 0.046 ton per square feet of building material.*

***Based on 10 CY capacity haul truck per District and conversion factor of 1.2641662 tons/CY per CalEEMod methodology.*

Intallation of Temporary Portables*

Phase 1

Buildings

Number of Portables Installed	39	units
Total Haul Trips	78	trip ends
Duration	45	work days
Daily Haul Trips	2	trip ends/day
1-way haul distance		miles

**Based in information provided by the District.*

Removal of Temporary Portables*

Phase 1

Buildings

Number of Portables Removed	10	units
Total Haul Trips	20	trip ends
Duration	6	work days
Daily Haul Trips	3	trip ends per day
1-way haul distance		miles

Phase 2		
Buildings		
Number of Portables Removed	22	units
Total Haul Trips	44	trip ends
Duration	6	work days
Daily Haul Trips	7	trip ends per day
1-way haul distance		miles

**Based in information provided by the District.*

Soil Haul*

Soil Export Amount	10,780	cubic yards	770
Total Haul Trips	1,540	trip ends	1540
Daily Haul Trips	35	trips ends/day	
1-way haul distance	20	miles (CalEEMod Default)	
*Haul truck capacity***	14	CY	
Haul Duration	44	days	

**Based in information provided by the District.*
***Per District.*

Construction Trips

Building Construction Phase

*Worker Trip Rate:**	0.42	trip/KSF
*Vendor Trip Rate:**	0.1639	trip/KSF

Development Phase	Worker Trip	Vendor Trip
Phase 1		
New Buildings	17	7
Renovated Buildings	13	5
Phase 2		
New Buildings	27	10

**CalEEMod Version 2016.3.1 Users Guide, Appendix A.*

Architectural Coating

	Building*
Percentage of Exterior Painted:	100%
Percentage of Interior Painted:	100%

**Assumes 100 percent of exterior and interior paintable areas would be coated.*

*Non-Residential Interior Paint VOC content:**	100	grams per liter
*Non-Residential Exterior Paint VOC content:**	100	grams per liter
*Parking Paint VOC content :**	100	grams per liter
*Parking Paint VOC content:**	100	grams per liter

**Based on SCAQMD Rule 1113.*

Land Use	Land Use Amount	CalEEMod Paintable Surface Area Multiplier*	Total Paintable Surface Area (BSF)	Total Paintable Interior Surface Area (BSF)*	Total Paintable Exterior Surface Area (BSF)*
Phase 1					
High School	70,754	2.0	141,508	106,131	35,377
			Subtotal:	***106,131***	***35,377***
Surface Parking	18,000	0.06	1,080	0	1,080
			Total	**106,131**	**36,457**
Phase 2					
High School	44,160	2.0	88,320	66,240	22,080
Elementary	19,903	2.0	39,806	29,855	9,952
			Subtotal:	***96,095***	***32,032***

**Based on CalEEMod methodology in calculating the paintable surface areas for a nonresidential building and surface parking lot.*

Construction Phasing: Phase 1*

5-Day Work Week

18 Month Construction Schedule

		Buildout Duration	18	months
Phase Name	**Start Date**	**End Date**	**Workdays**	**Total Days**
Asphalt Demolition	12/15/2018	1/14/2019	21	30
Site Preparation	1/15/2019	3/16/2019	44	60
Building Construction	3/18/2019	3/12/2020	259	360
Building Construction - Temporary Portables Installation	3/18/2019	5/17/2019	45	60
Architectural Coating	1/12/2020	3/12/2020	44	60
Asphalt Paving	3/13/2020	5/12/2020	43	60
Temporary Portables Removal**	5/13/2020	5/20/2020	6	7
Building Demolition	5/21/2020	6/20/2020	22	30
			2	18.2

*Based on schedule provided by the District.

**Assumes 1 week removal

Phase 1 Construction Equipment Mix*

***Based on information provided by the District unless otherwise noted.**

	Equipment Model	Pieces of Equipment	Hrs Op	HP	LF[1]	Worker Trips/ Day	CalEEMod Vendor Trips
Asphalt Demolition						**Default**	**Default+2**
Excavator	Excavator	**1**	8	**158**	**0.38**		
Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Bobcat/skid steer loader	Skid Steer Loaders	**1**	8	**65**	**0.37**		
Crushing Equipment	Crushing/Proc. Equipment	**1**	8	**85**	**0.78**		
Jackhammers	Crushing/Proc. Equipment	**2**	8	**85**	**0.78**		
Air Compressor	Air Compressor	**2**	8	**78**	**0.48**		
Water Truck[2]		**1**					**2**
Site Preparation						**Default**	**Default+2**
Excavator	Excavator	**1**	8	**158**	**0.38**		
Compactor	Plate Compactors	**1**	8	**8**	**0.43**		
Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Skip Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Roller	Roller	**2**	8	**80**	**0.38**		
Trencher	Trencher	**1**	8	**78**	**0.50**		
Water Truck		**1**					**2**
Building Construction						**Default**	**Default+10**
Concrete Trucks[3]	Cement and Mortar Mixers	**5**	8	**9**	**0.56**		**10**
Pile Driver	Bore/Drill Rigs	**1**	8	**221**	**0.50**		
Concrete Pump	Pumps	**1**	8	**84**	**0.74**		
Crane	Cranes	**1**	8	**231**	**0.29**		
Rough Terrain Forklift	Rough Terrain Forklift	**4**	8	**100**	**0.40**		
Backhoes	Tractors/Loaders/Backhoes	**2**	8	**97**	**0.37**		
Air Compressor	Air Compressor	**1**	8	**78**	**0.48**		
Building Construction - Temporary Portables Intallation						**Default**	**Default+2**
Crane	Cranes	**1**	8	**231**	**0.29**		
Haul Truck[4]							**2**
Architectural Coating						**Default**	**Default**
Air compressor	Air compressor	**1**	6	**78**	**0.48**		
Site Paving						**Default**	**Default+18**
Skip loader	Tractors/Loaders/Backhoes	**2**	8	**97**	**0.37**		
Roller	Roller	**1**	8	**80**	**0.38**		
Paver	Paver	**1**	8	**130**	**0.42**		
Asphalt Trucks[5]	Cement and Mortar Mixers	**8**	8	**9**	**0.56**		**16**
Water Truck		**1**					**2**
Temporary Portables Removal						**Default**	**Default+3**
Crane	Crane	**1**	8	**231**	**0.29**		
Haul Truck[4]							**3**
Building Demolition						**Default**	**Default+2**
Excavator	Excavator	**1**	8	**158**	**0.38**		
Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Skip Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Crushing Equipment	Crushing/Proc. Equipment	**1**	8	**85**	**0.78**		
Jackhammers	Crushing/Proc. Equipment	**2**	8	**85**	**0.78**		
Air Compressor	Air Compressor	**2**	8	**78**	**0.48**		
Water Truck		**1**					**2**

[1] Utilizes CalEEMod default values.

[2] Assumes 2 trips per water truck per day.

[3] Utilizes cement and mortar mixers and assumes 2 truck trips per truck per day to capture emissions from operation of cement trucks.

[4] Associated with hauling of the temporary portable classroom buildings.

[5] Utilizes cement and mortar mixers and assumes 2 truck trips per truck per day to capture emissions from operation of asphalt trucks.

Construction Phasing: Phase 2*

5-Day Work Week

18 Month Construction Schedule

		Buildout Duration	18	months
Phase Name	**Start Date**	**End Date**	**Workdays**	**Total Days**
Site Preparation	7/20/2020	9/18/2020	45	60
Building Construction	9/21/2020	3/20/2021	130	180
Architectural Coating	2/18/2021	3/20/2021	22	30
Demolition	3/22/2021	5/21/2021	45	60
Building Construction	5/24/2021	11/20/2021	130	180
Architectural Coating	10/21/2021	11/20/2021	22	30
Temporary Portables Removal**	11/22/2021	11/29/2021	6	7
Asphalt Paving	11/30/2021	1/29/2022	44	60
			2	18.3

*Based on schedule provided by the District.

Phase 2 Construction Equipment Mix*

***Based on information provided by the District unless otherwise noted.**

	Equipment Model	Pieces of Equipment	Hrs Op	HP	LF[1]	Worker Trips/ Day	CalEEMod Vendor Trips
Site Preparation						**Default**	**Default+2**
Excavator	Excavator	**1**	8	**158**	**0.38**		
Compactor	Plate Compactors	**1**	8	**8**	**0.43**		
Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Skip Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Roller	Roller	**2**	8	**80**	**0.38**		
Trencher	Trencher	**1**	8	**78**	**0.50**		
Water Truck		**1**					**2**
Building Construction						**Default**	**Default+10**
Concrete Trucks[2]	Cement and Mortar Mixers	**5**	8	**9**	**0.56**		**10**
Pile Driver	Bore/Drill Rigs	**1**	8	**221**	**0.50**		
Concrete Pump	Pumps	**1**	8	**84**	**0.74**		
Crane	Cranes	**1**	8	**231**	**0.29**		
Rough Terrain Forklift	Rough Terrain Forklift	**4**	8	**100**	**0.40**		
Backhoes	Tractors/Loaders/Backhoes	**2**	8	**97**	**0.37**		
Air Compressor	Air Compressor	**1**	8	**78**	**0.48**		
Architectural Coating						**Default**	**Default**
Air compressor		**1**	6				
Demolition						**Default**	**Default+2**
Excavator	Excavator	**1**	8	**158**	**0.38**		
Loader	Tractors/Loaders/Backhoes	**1**	8	**97**	**0.37**		
Bobcat/skid steer loader	Skid Steer Loaders	**1**	8	**65**	**0.37**		
Crushing Equipment	Crushing/Proc. Equipment	**1**	8	**85**	**0.78**		
Jackhammers	Crushing/Proc. Equipment	**2**	8	**85**	**0.78**		
Air Compressor	Air Compressor	**2**	8	**78**	**0.48**		
Water Truck[3]		**1**					**2**
Building Construction ES						**Default**	**Default+10**
Concrete Trucks[2]	Cement and Mortar Mixers	**5**	8	**9**	**0.56**		**10**
Pile Driver	Bore/Drill Rigs	**1**	8	**221**	**0.50**		
Concrete Pump	Pumps	**1**	8	**84**	**0.74**		
Crane	Cranes	**1**	8	**231**	**0.29**		
Rough Terrain Forklift	Rough Terrain Forklift	**4**	8	**100**	**0.40**		
Backhoes	Tractors/Loaders/Backhoes	**2**	8	**97**	**0.37**		
Air Compressor	Air Compressor	**1**	8	**78**	**0.48**		
Architectural Coating						**Default**	**Default**
Air compressor		**1**	8				
Temporary Portables Removal						**Default**	**Default+7**
Crane	Crane	**1**	8	**231**	**0.29**		
Haul Truck[4]							**7**
Site Paving						**Default**	**Default+18**
Skip loader	Tractors/Loaders/Backhoes	**2**	8	**97**	**0.37**		
Roller	Roller	**1**	8	**80**	**0.38**		
Paver	Paver	**1**	8	**130**	**0.42**		
Asphalt Trucks[5]	Cement and Mortar Mixers	**8**	8	**9**	**0.56**		**16**
Water Truck		**1**					**2**

[1] Utilizes CalEEMod default values.

[2] Utilizes cement and mortar mixers and assumes 2 truck trips per truck per day to capture emissions from operation of cement trucks.

[3] Assumes 2 trips per water truck per day.

[4] Utilizes cement and mortar mixers and assumes 2 truck trips per truck per day to capture emissions from operation of asphalt trucks.

[5] Associated with hauling of the temporary portable classroom buildings.

Pavement Volume to Weight Conversion

Location	Total SF of Area[1]	Assumed Thickness (foot)[2]	Pool Debris Volume (cu. ft)	Weight of Crushed Asphalt (lbs/cf)[3]	AC Mass (lbs)	AC Mass (tons)
Tennis Courts	45,171	0.33	15,057	89	1,338,400	669.20
Curbcut	920	0.50	460	140	64,400	32.20
Walkway	16,101	0.25	4,025	45	181,136	90.57
					TOTAL	**791.97**

[1] As measured on Google Earth based on the proposed project site plan.

[2] *Pavements and Surface Materials* . Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Conneticut Cooperative Extension System, 1999.

[3] Based on 2,400 pounds per cubic yard. http://www.calrecycle.ca.gov/swfacilities/cdi/Tools/Calculations.htm

Phase 1 Construction

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	70.75	1000sqft	21.09	70,754.00	0
Parking Lot	45.00	Space	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Assumes 1 crane for temporary portables installation.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips

Off-road Equipment - Assumes use of one crane.

Off-road Equipment - Based on information provided by the District.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District

Architectural Coating -

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	370.00	259.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	370.00	45.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/10/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	8/15/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	1/11/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	9/12/2019	5/12/2020
tblConstructionPhase	PhaseEndDate	1/25/2018	3/16/2019
tblConstructionPhase	PhaseStartDate	9/13/2019	1/12/2020

tblConstructionPhase	PhaseStartDate	3/16/2018	3/17/2019
tblConstructionPhase	PhaseStartDate	12/15/2017	12/15/2018
tblConstructionPhase	PhaseStartDate	8/16/2019	3/13/2020
tblConstructionPhase	PhaseStartDate	1/12/2018	1/15/2019
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	LotAcreage	1.62	21.09
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	69.00	111.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	HaulingTripNumber	202.00	324.00

tblTripsAndVMT	VendorTripNumber	15.00	25.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	15.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	37.00	3.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0201	0.1541	0.1463	2.6000e-004	6.0500e-003	9.9200e-003	0.0160	1.1600e-003	9.7400e-003	0.0109	0.0000	22.6508	22.6508	3.1100e-003	0.0000	22.7285
2019	0.4083	4.2865	3.5206	7.7100e-003	0.0833	0.1931	0.2764	0.0222	0.1822	0.2044	0.0000	688.3692	688.3692	0.1419	0.0000	691.9154
2020	0.4849	1.4502	1.3760	2.8500e-003	0.0532	0.0673	0.1206	0.0118	0.0642	0.0760	0.0000	248.1227	248.1227	0.0470	0.0000	249.2970
Maximum	**0.4849**	**4.2865**	**3.5206**	**7.7100e-003**	**0.0833**	**0.1931**	**0.2764**	**0.0222**	**0.1822**	**0.2044**	**0.0000**	**688.3692**	**688.3692**	**0.1419**	**0.0000**	**691.9154**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0201	0.1541	0.1463	2.6000e-004	3.6300e-003	9.9200e-003	0.0136	7.8000e-004	9.7400e-003	0.0105	0.0000	22.6508	22.6508	3.1100e-003	0.0000	22.7285
2019	0.4083	4.2865	3.5206	7.7100e-003	0.0751	0.1931	0.2682	0.0204	0.1822	0.2026	0.0000	688.3685	688.3685	0.1419	0.0000	691.9148
2020	0.4849	1.4502	1.3760	2.8500e-003	0.0384	0.0673	0.1057	9.3500e-003	0.0642	0.0735	0.0000	248.1225	248.1225	0.0470	0.0000	249.2968
Maximum	**0.4849**	**4.2865**	**3.5206**	**7.7100e-003**	**0.0751**	**0.1931**	**0.2682**	**0.0204**	**0.1822**	**0.2026**	**0.0000**	**688.3685**	**688.3685**	**0.1419**	**0.0000**	**691.9148**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio- CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.86**	**0.00**	**6.17**	**13.18**	**0.00**	**1.59**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
5	**12-15-2018**	**3-14-2019**	0.9524	0.9524
6	**3-15-2019**	**6-14-2019**	1.1831	1.1831
7	**6-15-2019**	**9-14-2019**	1.1878	1.1878
8	**9-15-2019**	**12-14-2019**	1.1761	1.1761
9	**12-15-2019**	**3-14-2020**	1.4618	1.4618
10	**3-15-2020**	**6-14-2020**	0.5997	0.5997
11	**6-15-2020**	**9-14-2020**	0.0648	0.0648
		Highest	1.4618	1.4618

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	12/15/2018	1/14/2019	5	21	
2	Site Preparation	Site Preparation	1/15/2019	3/16/2019	5	44	
3	Building Construction	Building Construction	3/17/2019	3/12/2020	5	259	
4	Temporary Portables Installation	Building Construction	3/17/2019	5/17/2019	5	45	
5	Architectural Coating	Architectural Coating	1/12/2020	3/12/2020	5	44	
6	Paving	Paving	3/13/2020	5/12/2020	5	43	
7	Temporary Portables Removal	Demolition	5/13/2020	5/20/2020	5	6	
8	Building Demolition	Demolition	5/21/2020	6/20/2020	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 106,131; Non-Residential Outdoor: 35,377; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Asphalt Demolition	Excavators	1	8.00	158	0.38
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74

Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Temporary Portables Installation	Cranes	1	8.00	231	0.29
Temporary Portables Removal	Excavators	0	8.00	158	0.38
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Excavators	1	8.00	158	0.38
Building Construction	Welders	0	8.00	46	0.45
Temporary Portables Installation	Forklifts	0	8.00	89	0.20
Temporary Portables Installation	Generator Sets	0	8.00	84	0.74
Temporary Portables Removal	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Temporary Portables Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Temporary Portables Installation	Welders	0	8.00	46	0.45
Asphalt Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Asphalt Demolition	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Asphalt Demolition	Air Compressors	2	8.00	78	0.48
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rollers	2	8.00	80	0.38
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Air Compressors	1	8.00	78	0.48

Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	4	8.00	100	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Building Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Building Demolition	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	37.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	8	20.00	2.00	111.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Installation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Demolition	8	20.00	2.00	324.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9300e-003	0.0000	3.9300e-003	6.0000e-004	0.0000	6.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0191	0.1425	0.1383	2.2000e-004		9.8600e-003	9.8600e-003		9.6900e-003	9.6900e-003	0.0000	18.8821	18.8821	2.8800e-003	0.0000	18.9542
Total	**0.0191**	**0.1425**	**0.1383**	**2.2000e-004**	**3.9300e-003**	**9.8600e-003**	**0.0138**	**6.0000e-004**	**9.6900e-003**	**0.0103**	**0.0000**	**18.8821**	**18.8821**	**2.8800e-003**	**0.0000**	**18.9542**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	9.7100e-003	2.0000e-003	2.0000e-005	8.4000e-004	4.0000e-005	8.8000e-004	2.2000e-004	3.0000e-005	2.6000e-004	0.0000	2.2930	2.2930	1.6000e-004	0.0000	2.2971
Vendor	5.0000e-005	1.3800e-003	3.9000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2779	0.2779	2.0000e-005	0.0000	0.2784
Worker	6.1000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1977	1.1977	5.0000e-005	0.0000	1.1988
Total	**9.5000e-004**	**0.0116**	**8.0000e-003**	**3.0000e-005**	**2.1200e-003**	**6.0000e-005**	**2.1800e-003**	**5.6000e-004**	**5.0000e-005**	**6.2000e-004**	**0.0000**	**3.7686**	**3.7686**	**2.3000e-004**	**0.0000**	**3.7743**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6800e-003	0.0000	1.6800e-003	2.5000e-004	0.0000	2.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0191	0.1425	0.1383	2.2000e-004		9.8600e-003	9.8600e-003		9.6900e-003	9.6900e-003	0.0000	18.8821	18.8821	2.8800e-003	0.0000	18.9542
Total	**0.0191**	**0.1425**	**0.1383**	**2.2000e-004**	**1.6800e-003**	**9.8600e-003**	**0.0115**	**2.5000e-004**	**9.6900e-003**	**9.9400e-003**	**0.0000**	**18.8821**	**18.8821**	**2.8800e-003**	**0.0000**	**18.9542**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.9000e-004	9.7100e-003	2.0000e-003	2.0000e-005	7.8000e-004	4.0000e-005	8.1000e-004	2.1000e-004	3.0000e-005	2.4000e-004	0.0000	2.2930	2.2930	1.6000e-004	0.0000	2.2971
Vendor	5.0000e-005	1.3800e-003	3.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2779	0.2779	2.0000e-005	0.0000	0.2784
Worker	6.1000e-004	5.2000e-004	5.6100e-003	1.0000e-005	1.1100e-003	1.0000e-005	1.1200e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.1977	1.1977	5.0000e-005	0.0000	1.1988
Total	**9.5000e-004**	**0.0116**	**8.0000e-003**	**3.0000e-005**	**1.9500e-003**	**6.0000e-005**	**2.0000e-003**	**5.3000e-004**	**5.0000e-005**	**5.8000e-004**	**0.0000**	**3.7686**	**3.7686**	**2.3000e-004**	**0.0000**	**3.7743**

3.2 Asphalt Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5700e-003	0.0000	3.5700e-003	5.4000e-004	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1174	0.1249	2.0000e-004		7.6300e-003	7.6300e-003		7.4900e-003	7.4900e-003	0.0000	17.0886	17.0886	2.4900e-003	0.0000	17.1508
Total	**0.0156**	**0.1174**	**0.1249**	**2.0000e-004**	**3.5700e-003**	**7.6300e-003**	**0.0112**	**5.4000e-004**	**7.4900e-003**	**8.0300e-003**	**0.0000**	**17.0886**	**17.0886**	**2.4900e-003**	**0.0000**	**17.1508**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.3600e-003	1.7800e-003	2.0000e-005	8.3000e-004	3.0000e-005	8.6000e-004	2.2000e-004	3.0000e-005	2.5000e-004	0.0000	2.0580	2.0580	1.5000e-004	0.0000	2.0616
Vendor	4.0000e-005	1.1800e-003	3.2000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.2501	0.2501	2.0000e-005	0.0000	0.2505
Worker	5.0000e-004	4.2000e-004	4.5400e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0534	1.0534	4.0000e-005	0.0000	1.0543
Total	**7.9000e-004**	**9.9600e-003**	**6.6400e-003**	**3.0000e-005**	**1.9900e-003**	**5.0000e-005**	**2.0400e-003**	**5.3000e-004**	**5.0000e-005**	**5.8000e-004**	**0.0000**	**3.3614**	**3.3614**	**2.1000e-004**	**0.0000**	**3.3663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5300e-003	0.0000	1.5300e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0156	0.1174	0.1249	2.0000e-004		7.6300e-003	7.6300e-003		7.4900e-003	7.4900e-003	0.0000	17.0886	17.0886	2.4900e-003	0.0000	17.1508
Total	**0.0156**	**0.1174**	**0.1249**	**2.0000e-004**	**1.5300e-003**	**7.6300e-003**	**9.1600e-003**	**2.3000e-004**	**7.4900e-003**	**7.7200e-003**	**0.0000**	**17.0886**	**17.0886**	**2.4900e-003**	**0.0000**	**17.1508**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.3600e-003	1.7800e-003	2.0000e-005	7.7000e-004	3.0000e-005	8.0000e-004	2.0000e-004	3.0000e-005	2.3000e-004	0.0000	2.0580	2.0580	1.5000e-004	0.0000	2.0616
Vendor	4.0000e-005	1.1800e-003	3.2000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2501	0.2501	2.0000e-005	0.0000	0.2505
Worker	5.0000e-004	4.2000e-004	4.5400e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	1.0534	1.0534	4.0000e-005	0.0000	1.0543
Total	**7.9000e-004**	**9.9600e-003**	**6.6400e-003**	**3.0000e-005**	**1.8400e-003**	**5.0000e-005**	**1.8900e-003**	**4.9000e-004**	**5.0000e-005**	**5.3000e-004**	**0.0000**	**3.3614**	**3.3614**	**2.1000e-004**	**0.0000**	**3.3663**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.3522	0.3197	4.5000e-004		0.0229	0.0229		0.0211	0.0211	0.0000	40.1937	40.1937	0.0126	0.0000	40.5080
Total	**0.0364**	**0.3522**	**0.3197**	**4.5000e-004**	**6.1000e-004**	**0.0229**	**0.0235**	**9.0000e-005**	**0.0211**	**0.0212**	**0.0000**	**40.1937**	**40.1937**	**0.0126**	**0.0000**	**40.5080**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3100e-003	0.2437	0.0518	6.1000e-004	0.0132	8.7000e-004	0.0141	3.6300e-003	8.3000e-004	4.4700e-003	0.0000	59.9588	59.9588	4.2300e-003	0.0000	60.0645
Vendor	1.9000e-004	5.2000e-003	1.4200e-003	1.0000e-005	2.8000e-004	3.0000e-005	3.1000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1003	1.1003	7.0000e-005	0.0000	1.1021
Worker	1.9800e-003	1.6500e-003	0.0180	5.0000e-005	4.3400e-003	4.0000e-005	4.3800e-003	1.1500e-003	4.0000e-005	1.1900e-003	0.0000	4.1713	4.1713	1.4000e-004	0.0000	4.1749
Total	**9.4800e-003**	**0.2506**	**0.0712**	**6.7000e-004**	**0.0179**	**9.4000e-004**	**0.0188**	**4.8600e-003**	**9.0000e-004**	**5.7700e-003**	**0.0000**	**65.2304**	**65.2304**	**4.4400e-003**	**0.0000**	**65.3415**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6000e-004	0.0000	2.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.3522	0.3197	4.5000e-004		0.0229	0.0229		0.0211	0.0211	0.0000	40.1937	40.1937	0.0126	0.0000	40.5080
Total	**0.0364**	**0.3522**	**0.3197**	**4.5000e-004**	**2.6000e-004**	**0.0229**	**0.0232**	**4.0000e-005**	**0.0211**	**0.0212**	**0.0000**	**40.1937**	**40.1937**	**0.0126**	**0.0000**	**40.5080**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.3100e-003	0.2437	0.0518	6.1000e-004	0.0123	8.7000e-004	0.0132	3.4100e-003	8.3000e-004	4.2500e-003	0.0000	59.9588	59.9588	4.2300e-003	0.0000	60.0645
Vendor	1.9000e-004	5.2000e-003	1.4200e-003	1.0000e-005	2.6000e-004	3.0000e-005	2.9000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1003	1.1003	7.0000e-005	0.0000	1.1021
Worker	1.9800e-003	1.6500e-003	0.0180	5.0000e-005	4.0000e-003	4.0000e-005	4.0400e-003	1.0700e-003	4.0000e-005	1.1000e-003	0.0000	4.1713	4.1713	1.4000e-004	0.0000	4.1749
Total	**9.4800e-003**	**0.2506**	**0.0712**	**6.7000e-004**	**0.0166**	**9.4000e-004**	**0.0175**	**4.5600e-003**	**9.0000e-004**	**5.4600e-003**	**0.0000**	**65.2304**	**65.2304**	**4.4400e-003**	**0.0000**	**65.3415**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3041	3.0941	2.6846	5.1000e-003		0.1535	0.1535		0.1452	0.1452	0.0000	443.9569	443.9569	0.1127	0.0000	446.7732
Total	**0.3041**	**3.0941**	**2.6846**	**5.1000e-003**		**0.1535**	**0.1535**		**0.1452**	**0.1452**	**0.0000**	**443.9569**	**443.9569**	**0.1127**	**0.0000**	**446.7732**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0110	0.3056	0.0836	6.7000e-004	0.0163	1.9200e-003	0.0182	4.7000e-003	1.8400e-003	6.5400e-003	0.0000	64.7042	64.7042	4.3200e-003	0.0000	64.8122
Worker	0.0192	0.0160	0.1739	4.5000e-004	0.0420	3.7000e-004	0.0423	0.0112	3.4000e-004	0.0115	0.0000	40.3383	40.3383	1.3900e-003	0.0000	40.3730
Total	**0.0301**	**0.3216**	**0.2575**	**1.1200e-003**	**0.0583**	**2.2900e-003**	**0.0606**	**0.0159**	**2.1800e-003**	**0.0180**	**0.0000**	**105.0425**	**105.0425**	**5.7100e-003**	**0.0000**	**105.1852**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3041	3.0941	2.6846	5.1000e-003		0.1535	0.1535		0.1452	0.1452	0.0000	443.9564	443.9564	0.1127	0.0000	446.7727
Total	**0.3041**	**3.0941**	**2.6846**	**5.1000e-003**		**0.1535**	**0.1535**		**0.1452**	**0.1452**	**0.0000**	**443.9564**	**443.9564**	**0.1127**	**0.0000**	**446.7727**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0110	0.3056	0.0836	6.7000e-004	0.0153	1.9200e-003	0.0172	4.4500e-003	1.8400e-003	6.2900e-003	0.0000	64.7042	64.7042	4.3200e-003	0.0000	64.8122
Worker	0.0192	0.0160	0.1739	4.5000e-004	0.0387	3.7000e-004	0.0391	0.0103	3.4000e-004	0.0107	0.0000	40.3383	40.3383	1.3900e-003	0.0000	40.3730
Total	**0.0301**	**0.3216**	**0.2575**	**1.1200e-003**	**0.0540**	**2.2900e-003**	**0.0562**	**0.0148**	**2.1800e-003**	**0.0170**	**0.0000**	**105.0425**	**105.0425**	**5.7100e-003**	**0.0000**	**105.1852**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.7191	0.6679	1.2800e-003		0.0340	0.0340		0.0321	0.0321	0.0000	109.8139	109.8139	0.0282	0.0000	110.5178
Total	**0.0708**	**0.7191**	**0.6679**	**1.2800e-003**		**0.0340**	**0.0340**		**0.0321**	**0.0321**	**0.0000**	**109.8139**	**109.8139**	**0.0282**	**0.0000**	**110.5178**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3600e-003	0.0704	0.0191	1.7000e-004	4.0900e-003	3.3000e-004	4.4200e-003	1.1800e-003	3.1000e-004	1.5000e-003	0.0000	16.1477	16.1477	1.0300e-003	0.0000	16.1734
Worker	4.4400e-003	3.5800e-003	0.0396	1.1000e-004	0.0105	9.0000e-005	0.0106	2.8000e-003	8.0000e-005	2.8800e-003	0.0000	9.8254	9.8254	3.1000e-004	0.0000	9.8331
Total	**6.8000e-003**	**0.0740**	**0.0587**	**2.8000e-004**	**0.0146**	**4.2000e-004**	**0.0151**	**3.9800e-003**	**3.9000e-004**	**4.3800e-003**	**0.0000**	**25.9731**	**25.9731**	**1.3400e-003**	**0.0000**	**26.0065**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0708	0.7191	0.6679	1.2800e-003		0.0340	0.0340		0.0321	0.0321	0.0000	109.8138	109.8138	0.0282	0.0000	110.5177
Total	**0.0708**	**0.7191**	**0.6679**	**1.2800e-003**		**0.0340**	**0.0340**		**0.0321**	**0.0321**	**0.0000**	**109.8138**	**109.8138**	**0.0282**	**0.0000**	**110.5177**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3600e-003	0.0704	0.0191	1.7000e-004	3.8300e-003	3.3000e-004	4.1600e-003	1.1200e-003	3.1000e-004	1.4300e-003	0.0000	16.1477	16.1477	1.0300e-003	0.0000	16.1734
Worker	4.4400e-003	3.5800e-003	0.0396	1.1000e-004	9.7200e-003	9.0000e-005	9.8100e-003	2.6000e-003	8.0000e-005	2.6800e-003	0.0000	9.8254	9.8254	3.1000e-004	0.0000	9.8331
Total	**6.8000e-003**	**0.0740**	**0.0587**	**2.8000e-004**	**0.0136**	**4.2000e-004**	**0.0140**	**3.7200e-003**	**3.9000e-004**	**4.1100e-003**	**0.0000**	**25.9731**	**25.9731**	**1.3400e-003**	**0.0000**	**26.0065**

3.5 Temporary Portables Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1352	0.0516	1.3000e-004		5.7300e-003	5.7300e-003		5.2700e-003	5.2700e-003	0.0000	11.6594	11.6594	3.6900e-003	0.0000	11.7516
Total	**0.0113**	**0.1352**	**0.0516**	**1.3000e-004**		**5.7300e-003**	**5.7300e-003**		**5.2700e-003**	**5.2700e-003**	**0.0000**	**11.6594**	**11.6594**	**3.6900e-003**	**0.0000**	**11.7516**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.3200e-003	1.4500e-003	1.0000e-005	2.8000e-004	3.0000e-005	3.2000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1253	1.1253	8.0000e-005	0.0000	1.1272
Worker	3.4000e-004	2.8000e-004	3.0600e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.7110	0.7110	2.0000e-005	0.0000	0.7116
Total	**5.3000e-004**	**5.6000e-003**	**4.5100e-003**	**2.0000e-005**	**1.0200e-003**	**4.0000e-005**	**1.0700e-003**	**2.8000e-004**	**4.0000e-005**	**3.1000e-004**	**0.0000**	**1.8363**	**1.8363**	**1.0000e-004**	**0.0000**	**1.8388**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1352	0.0516	1.3000e-004		5.7300e-003	5.7300e-003		5.2700e-003	5.2700e-003	0.0000	11.6593	11.6593	3.6900e-003	0.0000	11.7516
Total	**0.0113**	**0.1352**	**0.0516**	**1.3000e-004**		**5.7300e-003**	**5.7300e-003**		**5.2700e-003**	**5.2700e-003**	**0.0000**	**11.6593**	**11.6593**	**3.6900e-003**	**0.0000**	**11.7516**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.3200e-003	1.4500e-003	1.0000e-005	2.7000e-004	3.0000e-005	3.0000e-004	8.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.1253	1.1253	8.0000e-005	0.0000	1.1272
Worker	3.4000e-004	2.8000e-004	3.0600e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.7110	0.7110	2.0000e-005	0.0000	0.7116
Total	**5.3000e-004**	**5.6000e-003**	**4.5100e-003**	**2.0000e-005**	**9.5000e-004**	**4.0000e-005**	**9.9000e-004**	**2.6000e-004**	**4.0000e-005**	**3.0000e-004**	**0.0000**	**1.8363**	**1.8363**	**1.0000e-004**	**0.0000**	**1.8388**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.0370	0.0403	7.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6280
Total	**0.3358**	**0.0370**	**0.0403**	**7.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6280**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	5.7000e-004	6.3400e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5729	1.5729	5.0000e-005	0.0000	1.5741
Total	**7.1000e-004**	**5.7000e-004**	**6.3400e-003**	**2.0000e-005**	**1.6900e-003**	**1.0000e-005**	**1.7000e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.5729**	**1.5729**	**5.0000e-005**	**0.0000**	**1.5741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3305					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.3300e-003	0.0370	0.0403	7.0000e-005		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003	0.0000	5.6172	5.6172	4.3000e-004	0.0000	5.6280
Total	**0.3358**	**0.0370**	**0.0403**	**7.0000e-005**		**2.4400e-003**	**2.4400e-003**		**2.4400e-003**	**2.4400e-003**	**0.0000**	**5.6172**	**5.6172**	**4.3000e-004**	**0.0000**	**5.6280**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	5.7000e-004	6.3400e-003	2.0000e-005	1.5600e-003	1.0000e-005	1.5700e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.5729	1.5729	5.0000e-005	0.0000	1.5741
Total	**7.1000e-004**	**5.7000e-004**	**6.3400e-003**	**2.0000e-005**	**1.5600e-003**	**1.0000e-005**	**1.5700e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.5729**	**1.5729**	**5.0000e-005**	**0.0000**	**1.5741**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0292	0.2590	0.2541	4.1000e-004		0.0140	0.0140		0.0131	0.0131	0.0000	33.4503	33.4503	9.0900e-003	0.0000	33.6775
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0298**	**0.2590**	**0.2541**	**4.1000e-004**		**0.0140**	**0.0140**		**0.0131**	**0.0131**	**0.0000**	**33.4503**	**33.4503**	**9.0900e-003**	**0.0000**	**33.6775**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-003	0.0419	0.0114	1.0000e-004	2.4400e-003	2.0000e-004	2.6300e-003	7.0000e-004	1.9000e-004	8.9000e-004	0.0000	9.6141	9.6141	6.1000e-004	0.0000	9.6294
Worker	2.9800e-003	2.4000e-003	0.0266	7.0000e-005	7.0700e-003	6.0000e-005	7.1300e-003	1.8800e-003	6.0000e-005	1.9300e-003	0.0000	6.5877	6.5877	2.1000e-004	0.0000	6.5929
Total	**4.3800e-003**	**0.0443**	**0.0379**	**1.7000e-004**	**9.5100e-003**	**2.6000e-004**	**9.7600e-003**	**2.5800e-003**	**2.5000e-004**	**2.8200e-003**	**0.0000**	**16.2018**	**16.2018**	**8.2000e-004**	**0.0000**	**16.2223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0292	0.2590	0.2541	4.1000e-004		0.0140	0.0140		0.0131	0.0131	0.0000	33.4503	33.4503	9.0900e-003	0.0000	33.6774
Paving	5.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0298**	**0.2590**	**0.2541**	**4.1000e-004**		**0.0140**	**0.0140**		**0.0131**	**0.0131**	**0.0000**	**33.4503**	**33.4503**	**9.0900e-003**	**0.0000**	**33.6774**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.4000e-003	0.0419	0.0114	1.0000e-004	2.2800e-003	2.0000e-004	2.4800e-003	6.7000e-004	1.9000e-004	8.5000e-004	0.0000	9.6141	9.6141	6.1000e-004	0.0000	9.6294
Worker	2.9800e-003	2.4000e-003	0.0266	7.0000e-005	6.5200e-003	6.0000e-005	6.5800e-003	1.7400e-003	6.0000e-005	1.8000e-003	0.0000	6.5877	6.5877	2.1000e-004	0.0000	6.5929
Total	**4.3800e-003**	**0.0443**	**0.0379**	**1.7000e-004**	**8.8000e-003**	**2.6000e-004**	**9.0600e-003**	**2.4100e-003**	**2.5000e-004**	**2.6500e-003**	**0.0000**	**16.2018**	**16.2018**	**8.2000e-004**	**0.0000**	**16.2223**

3.8 Temporary Portables Removal - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3600e-003	0.0162	6.3500e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.1000e-004	6.1000e-004	0.0000	1.5208	1.5208	4.9000e-004	0.0000	1.5331
Total	**1.3600e-003**	**0.0162**	**6.3500e-003**	**2.0000e-005**	**0.0000**	**6.7000e-004**	**6.7000e-004**	**0.0000**	**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.5208**	**1.5208**	**4.9000e-004**	**0.0000**	**1.5331**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	9.8000e-004	2.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2236	0.2236	1.0000e-005	0.0000	0.2239
Worker	4.0000e-005	3.0000e-005	3.7000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0919	0.0919	0.0000	0.0000	0.0920
Total	**7.0000e-005**	**1.0100e-003**	**6.3000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.3155**	**0.3155**	**1.0000e-005**	**0.0000**	**0.3159**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3600e-003	0.0162	6.3500e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.1000e-004	6.1000e-004	0.0000	1.5208	1.5208	4.9000e-004	0.0000	1.5331
Total	**1.3600e-003**	**0.0162**	**6.3500e-003**	**2.0000e-005**	**0.0000**	**6.7000e-004**	**6.7000e-004**	**0.0000**	**6.1000e-004**	**6.1000e-004**	**0.0000**	**1.5208**	**1.5208**	**4.9000e-004**	**0.0000**	**1.5331**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.0000e-005	9.8000e-004	2.6000e-004	0.0000	5.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2236	0.2236	1.0000e-005	0.0000	0.2239
Worker	4.0000e-005	3.0000e-005	3.7000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0919	0.0919	0.0000	0.0000	0.0920
Total	**7.0000e-005**	**1.0100e-003**	**6.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.3155**	**0.3155**	**1.0000e-005**	**0.0000**	**0.3159**

3.9 Building Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0219	0.0000	0.0219	3.3200e-003	0.0000	3.3200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0327	0.2476	0.2835	4.4000e-004		0.0154	0.0154		0.0151	0.0151	0.0000	38.3771	38.3771	5.6100e-003	0.0000	38.5172
Total	**0.0327**	**0.2476**	**0.2835**	**4.4000e-004**	**0.0219**	**0.0154**	**0.0373**	**3.3200e-003**	**0.0151**	**0.0184**	**0.0000**	**38.3771**	**38.3771**	**5.6100e-003**	**0.0000**	**38.5172**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4300e-003	0.0481	0.0106	1.3000e-004	2.7800e-003	1.5000e-004	2.9300e-003	7.6000e-004	1.4000e-004	9.1000e-004	0.0000	12.4867	12.4867	8.7000e-004	0.0000	12.5084
Vendor	8.0000e-005	2.3800e-003	6.5000e-004	1.0000e-005	1.4000e-004	1.0000e-005	1.5000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5465	0.5465	3.0000e-005	0.0000	0.5474
Worker	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.4100e-003	2.0000e-005	2.4300e-003	6.4000e-004	2.0000e-005	6.6000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**2.5300e-003**	**0.0513**	**0.0203**	**1.6000e-004**	**5.3300e-003**	**1.8000e-004**	**5.5100e-003**	**1.4400e-003**	**1.7000e-004**	**1.6200e-003**	**0.0000**	**15.2802**	**15.2802**	**9.7000e-004**	**0.0000**	**15.3046**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3700e-003	0.0000	9.3700e-003	1.4200e-003	0.0000	1.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0327	0.2476	0.2834	4.4000e-004		0.0154	0.0154		0.0151	0.0151	0.0000	38.3771	38.3771	5.6100e-003	0.0000	38.5172
Total	**0.0327**	**0.2476**	**0.2834**	**4.4000e-004**	**9.3700e-003**	**0.0154**	**0.0248**	**1.4200e-003**	**0.0151**	**0.0165**	**0.0000**	**38.3771**	**38.3771**	**5.6100e-003**	**0.0000**	**38.5172**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4300e-003	0.0481	0.0106	1.3000e-004	2.6000e-003	1.5000e-004	2.7500e-003	7.2000e-004	1.4000e-004	8.6000e-004	0.0000	12.4867	12.4867	8.7000e-004	0.0000	12.5084
Vendor	8.0000e-005	2.3800e-003	6.5000e-004	1.0000e-005	1.3000e-004	1.0000e-005	1.4000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.5465	0.5465	3.0000e-005	0.0000	0.5474
Worker	1.0200e-003	8.2000e-004	9.0600e-003	2.0000e-005	2.2200e-003	2.0000e-005	2.2400e-003	5.9000e-004	2.0000e-005	6.1000e-004	0.0000	2.2470	2.2470	7.0000e-005	0.0000	2.2487
Total	**2.5300e-003**	**0.0513**	**0.0203**	**1.6000e-004**	**4.9500e-003**	**1.8000e-004**	**5.1300e-003**	**1.3500e-003**	**1.7000e-004**	**1.5200e-003**	**0.0000**	**15.2802**	**15.2802**	**9.7000e-004**	**0.0000**	**15.3046**

Phase 1 Construction

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	70.75	1000sqft	21.09	70,754.00	0
Parking Lot	45.00	Space	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Assumes 1 crane for temporary portables installation.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips

Off-road Equipment - Assumes use of one crane.

Off-road Equipment - Based on information provided by the District.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District

Architectural Coating -

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	370.00	259.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	370.00	45.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/10/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	8/15/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	1/11/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	9/12/2019	5/12/2020
tblConstructionPhase	PhaseEndDate	1/25/2018	3/16/2019
tblConstructionPhase	PhaseStartDate	9/13/2019	1/12/2020
tblConstructionPhase	PhaseStartDate	3/16/2018	3/17/2019

tblConstructionPhase	PhaseStartDate	12/15/2017	12/15/2018
tblConstructionPhase	PhaseStartDate	8/16/2019	3/13/2020
tblConstructionPhase	PhaseStartDate	1/12/2018	1/15/2019
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	LotAcreage	1.62	21.09
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	69.00	111.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	HaulingTripNumber	202.00	324.00
tblTripsAndVMT	VendorTripNumber	15.00	25.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	15.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	37.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.6500	27.9381	26.6501	0.0466	1.1070	1.8037	2.9107	0.2121	1.7715	1.9837	0.0000	4,554.2621	4,554.2621	0.6225	0.0000	4,569.8259
2019	3.7542	39.1736	30.9894	0.0669	1.1204	1.7611	2.6555	0.2290	1.6595	1.8278	0.0000	6,537.4877	6,537.4877	1.4454	0.0000	6,573.6234
2020	18.2777	32.1462	30.1444	0.0639	2.4858	1.4336	3.9038	0.4352	1.3865	1.8217	0.0000	6,147.2352	6,147.2352	1.2741	0.0000	6,179.0882
Maximum	**18.2777**	**39.1736**	**30.9894**	**0.0669**	**2.4858**	**1.8037**	**3.9038**	**0.4352**	**1.7715**	**1.9837**	**0.0000**	**6,537.4877**	**6,537.4877**	**1.4454**	**0.0000**	**6,573.6234**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.6500	27.9381	26.6501	0.0466	0.6675	1.8037	2.4712	0.1427	1.7715	1.9143	0.0000	4,554.262	4,554.2621	0.6225	0.0000	4,569.825
2019	3.7542	39.1736	30.9894	0.0669	0.7796	1.7611	2.3350	0.2123	1.6595	1.8165	0.0000	6,537.487	6,537.4877	1.4454	0.0000	6,573.623
2020	18.2777	32.1462	30.1444	0.0639	1.3096	1.4336	2.7275	0.2537	1.3865	1.6402	0.0000	6,147.235	6,147.2352	1.2741	0.0000	6,179.088
Maximum	**18.2777**	**39.1736**	**30.9894**	**0.0669**	**1.3096**	**1.8037**	**2.7275**	**0.2537**	**1.7715**	**1.9143**	**0.0000**	**6,537.487**	**6,537.4877**	**1.4454**	**0.0000**	**6,573.623**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio- CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**41.51**	**0.00**	**20.45**	**30.54**	**0.00**	**4.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	12/15/2018	1/14/2019	5	21	
2	Site Preparation	Site Preparation	1/15/2019	3/16/2019	5	44	
3	Building Construction	Building Construction	3/17/2019	3/12/2020	5	259	
4	Temporary Portables Installation	Building Construction	3/17/2019	5/17/2019	5	45	
5	Architectural Coating	Architectural Coating	1/12/2020	3/12/2020	5	44	
6	Paving	Paving	3/13/2020	5/12/2020	5	43	
7	Temporary Portables Removal	Demolition	5/13/2020	5/20/2020	5	6	
8	Building Demolition	Demolition	5/21/2020	6/20/2020	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 106,131; Non-Residential Outdoor: 35,377; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Asphalt Demolition	Excavators	1	8.00	158	0.38
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Temporary Portables Installation	Cranes	1	8.00	231	0.29
Temporary Portables Removal	Excavators	0	8.00	158	0.38
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Excavators	1	8.00	158	0.38
Building Construction	Welders	0	8.00	46	0.45
Temporary Portables Installation	Forklifts	0	8.00	89	0.20
Temporary Portables Installation	Generator Sets	0	8.00	84	0.74
Temporary Portables Removal	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Temporary Portables Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Temporary Portables Installation	Welders	0	8.00	46	0.45
Asphalt Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Asphalt Demolition	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Asphalt Demolition	Air Compressors	2	8.00	78	0.48
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rollers	2	8.00	80	0.38
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Air Compressors	1	8.00	78	0.48

Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	4	8.00	100	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Building Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Building Demolition	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	37.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	8	20.00	2.00	111.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Installation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Demolition	8	20.00	2.00	324.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7147	0.0000	0.7147	0.1082	0.0000	0.1082			0.0000			0.0000
Off-Road	3.4778	25.9019	25.1496	0.0393		1.7935	1.7935		1.7618	1.7618		3,784.3635	3,784.3635	0.5776		3,798.8028
Total	**3.4778**	**25.9019**	**25.1496**	**0.0393**	**0.7147**	**1.7935**	**2.5082**	**0.1082**	**1.7618**	**1.8701**		**3,784.3635**	**3,784.3635**	**0.5776**		**3,798.8028**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0525	1.7076	0.3533	4.2800e-003	0.1559	6.5000e-003	0.1624	0.0409	6.2100e-003	0.0471		462.8248	462.8248	0.0319		463.6214
Vendor	9.2000e-003	0.2451	0.0670	5.3000e-004	0.0128	1.7300e-003	0.0145	3.6900e-003	1.6500e-003	5.3400e-003		56.3359	56.3359	3.7100e-003		56.4286
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		250.7380	250.7380	9.4000e-003		250.9731
Total	**0.1722**	**2.0361**	**1.5005**	**7.3300e-003**	**0.3923**	**0.0102**	**0.4025**	**0.1039**	**9.7000e-003**	**0.1136**		**769.8987**	**769.8987**	**0.0450**		**771.0231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3056	0.0000	0.3056	0.0463	0.0000	0.0463			0.0000			0.0000
Off-Road	3.4778	25.9019	25.1496	0.0393		1.7935	1.7935		1.7618	1.7618	0.0000	3,784.3635	3,784.3635	0.5776		3,798.8028
Total	**3.4778**	**25.9019**	**25.1496**	**0.0393**	**0.3056**	**1.7935**	**2.0990**	**0.0463**	**1.7618**	**1.8081**	**0.0000**	**3,784.3635**	**3,784.3635**	**0.5776**		**3,798.8028**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0525	1.7076	0.3533	4.2800e-003	0.1439	6.5000e-003	0.1504	0.0380	6.2100e-003	0.0442		462.8248	462.8248	0.0319		463.6214
Vendor	9.2000e-003	0.2451	0.0670	5.3000e-004	0.0120	1.7300e-003	0.0137	3.4800e-003	1.6500e-003	5.1400e-003		56.3359	56.3359	3.7100e-003		56.4286
Worker	0.1105	0.0834	1.0802	2.5200e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		250.7380	250.7380	9.4000e-003		250.9731
Total	**0.1722**	**2.0361**	**1.5005**	**7.3300e-003**	**0.3620**	**0.0102**	**0.3722**	**0.0965**	**9.7000e-003**	**0.1062**		**769.8987**	**769.8987**	**0.0450**		**771.0231**

3.2 Asphalt Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7147	0.0000	0.7147	0.1082	0.0000	0.1082			0.0000			0.0000
Off-Road	3.1093	23.4725	24.9826	0.0393		1.5258	1.5258		1.4988	1.4988		3,767.3986	3,767.3986	0.5485		3,781.1114
Total	**3.1093**	**23.4725**	**24.9826**	**0.0393**	**0.7147**	**1.5258**	**2.2405**	**0.1082**	**1.4988**	**1.6071**		**3,767.3986**	**3,767.3986**	**0.5485**		**3,781.1114**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0497	1.6189	0.3452	4.2200e-003	0.1693	5.9400e-003	0.1752	0.0442	5.6800e-003	0.0499		456.9562	456.9562	0.0315		457.7430
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.1579**	**1.9238**	**1.3709**	**7.1800e-003**	**0.4056**	**9.3500e-003**	**0.4150**	**0.1072**	**8.8700e-003**	**0.1160**		**755.3097**	**755.3097**	**0.0434**		**756.3941**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3056	0.0000	0.3056	0.0463	0.0000	0.0463			0.0000			0.0000
Off-Road	3.1093	23.4725	24.9826	0.0393		1.5258	1.5258		1.4988	1.4988	0.0000	3,767.3986	3,767.3986	0.5485		3,781.1114
Total	**3.1093**	**23.4725**	**24.9826**	**0.0393**	**0.3056**	**1.5258**	**1.8313**	**0.0463**	**1.4988**	**1.5451**	**0.0000**	**3,767.3986**	**3,767.3986**	**0.5485**		**3,781.1114**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0497	1.6189	0.3452	4.2200e-003	0.1561	5.9400e-003	0.1620	0.0410	5.6800e-003	0.0466		456.9562	456.9562	0.0315		457.7430
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0120	1.4800e-003	0.0135	3.4800e-003	1.4100e-003	4.9000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0999	0.0734	0.9643	2.4400e-003	0.2061	1.9300e-003	0.2080	0.0550	1.7800e-003	0.0568		242.5906	242.5906	8.3300e-003		242.7989
Total	**0.1579**	**1.9238**	**1.3709**	**7.1800e-003**	**0.3741**	**9.3500e-003**	**0.3835**	**0.0994**	**8.8700e-003**	**0.1083**		**755.3097**	**755.3097**	**0.0434**		**756.3941**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0277	0.0000	0.0277	4.2000e-003	0.0000	4.2000e-003			0.0000			0.0000
Off-Road	1.6539	16.0070	14.5327	0.0205		1.0420	1.0420		0.9594	0.9594		2,013.9098	2,013.9098	0.6299		2,029.6560
Total	**1.6539**	**16.0070**	**14.5327**	**0.0205**	**0.0277**	**1.0420**	**1.0697**	**4.2000e-003**	**0.9594**	**0.9636**		**2,013.9098**	**2,013.9098**	**0.6299**		**2,029.6560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3289	10.7199	2.2856	0.0280	0.6119	0.0393	0.6513	0.1677	0.0376	0.2054		3,025.7911	3,025.7911	0.2084		3,031.0007
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.4271**	**11.0175**	**3.2149**	**0.0307**	**0.8259**	**0.0426**	**0.8685**	**0.2248**	**0.0406**	**0.2654**		**3,299.8856**	**3,299.8856**	**0.2195**		**3,305.3720**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0118	0.0000	0.0118	1.7900e-003	0.0000	1.7900e-003			0.0000			0.0000
Off-Road	1.6539	16.0070	14.5327	0.0205		1.0420	1.0420		0.9594	0.9594	0.0000	2,013.9098	2,013.9098	0.6299		2,029.6560
Total	**1.6539**	**16.0070**	**14.5327**	**0.0205**	**0.0118**	**1.0420**	**1.0538**	**1.7900e-003**	**0.9594**	**0.9612**	**0.0000**	**2,013.9098**	**2,013.9098**	**0.6299**		**2,029.6560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3289	10.7199	2.2856	0.0280	0.5703	0.0393	0.6096	0.1575	0.0376	0.1952		3,025.7911	3,025.7911	0.2084		3,031.0007
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0120	1.4800e-003	0.0135	3.4800e-003	1.4100e-003	4.9000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0899	0.0661	0.8679	2.1900e-003	0.1855	1.7300e-003	0.1872	0.0495	1.6000e-003	0.0511		218.3315	218.3315	7.5000e-003		218.5190
Total	**0.4271**	**11.0175**	**3.2149**	**0.0307**	**0.7677**	**0.0426**	**0.8103**	**0.2105**	**0.0406**	**0.2511**		**3,299.8856**	**3,299.8856**	**0.2195**		**3,305.3720**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9382	29.8950	25.9386	0.0492		1.4827	1.4827		1.4026	1.4026		4,728.2965	4,728.2965	1.1998		4,758.2914
Total	**2.9382**	**29.8950**	**25.9386**	**0.0492**		**1.4827**	**1.4827**		**1.4026**	**1.4026**		**4,728.2965**	**4,728.2965**	**1.1998**		**4,758.2914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1039	2.8932	0.7677	6.5300e-003	0.1601	0.0185	0.1785	0.0461	0.0177	0.0637		697.0366	697.0366	0.0447		698.1533
Worker	0.1848	0.1359	1.7840	4.5100e-003	0.4136	3.5700e-003	0.4171	0.1097	3.2900e-003	0.1130		448.7926	448.7926	0.0154		449.1780
Total	**0.2887**	**3.0291**	**2.5517**	**0.0110**	**0.5736**	**0.0220**	**0.5956**	**0.1558**	**0.0209**	**0.1767**		**1,145.8291**	**1,145.8291**	**0.0601**		**1,147.3312**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9382	29.8950	25.9386	0.0492		1.4827	1.4827		1.4026	1.4026	0.0000	4,728.2965	4,728.2965	1.1998		4,758.2914
Total	**2.9382**	**29.8950**	**25.9386**	**0.0492**		**1.4827**	**1.4827**		**1.4026**	**1.4026**	**0.0000**	**4,728.2965**	**4,728.2965**	**1.1998**		**4,758.2914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1039	2.8932	0.7677	6.5300e-003	0.1498	0.0185	0.1682	0.0436	0.0177	0.0612		697.0366	697.0366	0.0447		698.1533
Worker	0.1848	0.1359	1.7840	4.5100e-003	0.3812	3.5700e-003	0.3848	0.1017	3.2900e-003	0.1050		448.7926	448.7926	0.0154		449.1780
Total	**0.2887**	**3.0291**	**2.5517**	**0.0110**	**0.5310**	**0.0220**	**0.5530**	**0.1453**	**0.0209**	**0.1662**		**1,145.8291**	**1,145.8291**	**0.0601**		**1,147.3312**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357		4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**		**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0889	2.6593	0.6968	6.4900e-003	0.1601	0.0125	0.1726	0.0461	0.0120	0.0581		692.5617	692.5617	0.0423		693.6183
Worker	0.1703	0.1211	1.6200	4.3700e-003	0.4136	3.4600e-003	0.4170	0.1097	3.1900e-003	0.1129		435.1618	435.1618	0.0137		435.5048
Total	**0.2592**	**2.7804**	**2.3168**	**0.0109**	**0.5736**	**0.0160**	**0.5896**	**0.1558**	**0.0152**	**0.1709**		**1,127.7235**	**1,127.7235**	**0.0560**		**1,129.1231**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357	0.0000	4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**	**0.0000**	**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0889	2.6593	0.6968	6.4900e-003	0.1498	0.0125	0.1623	0.0436	0.0120	0.0555		692.5617	692.5617	0.0423		693.6183
Worker	0.1703	0.1211	1.6200	4.3700e-003	0.3812	3.4600e-003	0.3847	0.1017	3.1900e-003	0.1049		435.1618	435.1618	0.0137		435.5048
Total	**0.2592**	**2.7804**	**2.3168**	**0.0109**	**0.5310**	**0.0160**	**0.5470**	**0.1453**	**0.0152**	**0.1605**		**1,127.7235**	**1,127.7235**	**0.0560**		**1,129.1231**

3.5 Temporary Portables Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5040	6.0070	2.2930	5.7700e-003		0.2546	0.2546		0.2343	0.2343		571.2106	571.2106	0.1807		575.7287
Total	**0.5040**	**6.0070**	**2.2930**	**5.7700e-003**		**0.2546**	**0.2546**		**0.2343**	**0.2343**		**571.2106**	**571.2106**	**0.1807**		**575.7287**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0128	1.4800e-003	0.0143	3.6900e-003	1.4100e-003	5.1000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0150	0.0110	0.1447	3.7000e-004	0.0335	2.9000e-004	0.0338	8.8900e-003	2.7000e-004	9.1600e-003		36.3886	36.3886	1.2500e-003		36.4198
Total	**0.0233**	**0.2425**	**0.2061**	**8.9000e-004**	**0.0463**	**1.7700e-003**	**0.0481**	**0.0126**	**1.6800e-003**	**0.0143**		**92.1515**	**92.1515**	**4.8200e-003**		**92.2721**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5040	6.0070	2.2930	5.7700e-003		0.2546	0.2546		0.2343	0.2343	0.0000	571.2106	571.2106	0.1807		575.7287
Total	**0.5040**	**6.0070**	**2.2930**	**5.7700e-003**		**0.2546**	**0.2546**		**0.2343**	**0.2343**	**0.0000**	**571.2106**	**571.2106**	**0.1807**		**575.7287**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.3100e-003	0.2315	0.0614	5.2000e-004	0.0120	1.4800e-003	0.0135	3.4800e-003	1.4100e-003	4.9000e-003		55.7629	55.7629	3.5700e-003		55.8523
Worker	0.0150	0.0110	0.1447	3.7000e-004	0.0309	2.9000e-004	0.0312	8.2500e-003	2.7000e-004	8.5200e-003		36.3886	36.3886	1.2500e-003		36.4198
Total	**0.0233**	**0.2425**	**0.2061**	**8.9000e-004**	**0.0429**	**1.7700e-003**	**0.0447**	**0.0117**	**1.6800e-003**	**0.0134**		**92.1515**	**92.1515**	**4.8200e-003**		**92.2721**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**15.2625**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0322	0.0229	0.3065	8.3000e-004	0.0782	6.5000e-004	0.0789	0.0208	6.0000e-004	0.0214		82.3279	82.3279	2.6000e-003		82.3928
Total	**0.0322**	**0.0229**	**0.3065**	**8.3000e-004**	**0.0782**	**6.5000e-004**	**0.0789**	**0.0208**	**6.0000e-004**	**0.0214**		**82.3279**	**82.3279**	**2.6000e-003**		**82.3928**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**15.2625**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0322	0.0229	0.3065	8.3000e-004	0.0721	6.5000e-004	0.0728	0.0193	6.0000e-004	0.0199		82.3279	82.3279	2.6000e-003		82.3928
Total	**0.0322**	**0.0229**	**0.3065**	**8.3000e-004**	**0.0721**	**6.5000e-004**	**0.0728**	**0.0193**	**6.0000e-004**	**0.0199**		**82.3279**	**82.3279**	**2.6000e-003**		**82.3928**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3599	12.0472	11.8187	0.0192		0.6500	0.6500		0.6072	0.6072		1,715.0061	1,715.0061	0.4659		1,726.6541
Paving	0.0250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3849**	**12.0472**	**11.8187**	**0.0192**		**0.6500**	**0.6500**		**0.6072**	**0.6072**		**1,715.0061**	**1,715.0061**	**0.4659**		**1,726.6541**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0640	1.9147	0.5017	4.6700e-003	0.1152	9.0100e-003	0.1243	0.0332	8.6200e-003	0.0418		498.6445	498.6445	0.0304		499.4052
Worker	0.1381	0.0982	1.3135	3.5400e-003	0.3353	2.8000e-003	0.3381	0.0889	2.5800e-003	0.0915		352.8339	352.8339	0.0111		353.1120
Total	**0.2021**	**2.0129**	**1.8152**	**8.2100e-003**	**0.4506**	**0.0118**	**0.4624**	**0.1221**	**0.0112**	**0.1333**		**851.4783**	**851.4783**	**0.0416**		**852.5171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3599	12.0472	11.8187	0.0192		0.6500	0.6500		0.6072	0.6072	0.0000	1,715.0061	1,715.0061	0.4659		1,726.6541
Paving	0.0250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3849**	**12.0472**	**11.8187**	**0.0192**		**0.6500**	**0.6500**		**0.6072**	**0.6072**	**0.0000**	**1,715.0061**	**1,715.0061**	**0.4659**		**1,726.6541**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0640	1.9147	0.5017	4.6700e-003	0.1079	9.0100e-003	0.1169	0.0314	8.6200e-003	0.0400		498.6445	498.6445	0.0304		499.4052
Worker	0.1381	0.0982	1.3135	3.5400e-003	0.3091	2.8000e-003	0.3119	0.0825	2.5800e-003	0.0851		352.8339	352.8339	0.0111		353.1120
Total	**0.2021**	**2.0129**	**1.8152**	**8.2100e-003**	**0.4169**	**0.0118**	**0.4288**	**0.1139**	**0.0112**	**0.1251**		**851.4783**	**851.4783**	**0.0416**		**852.5171**

3.8 Temporary Portables Removal - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4534	5.3915	2.1154	5.7700e-003		0.2223	0.2223		0.2045	0.2045		558.7896	558.7896	0.1807		563.3077
Total	**0.4534**	**5.3915**	**2.1154**	**5.7700e-003**	**0.0000**	**0.2223**	**0.2223**	**0.0000**	**0.2045**	**0.2045**		**558.7896**	**558.7896**	**0.1807**		**563.3077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0107	0.3191	0.0836	7.8000e-004	0.0192	1.5000e-003	0.0207	5.5300e-003	1.4400e-003	6.9700e-003		83.1074	83.1074	5.0700e-003		83.2342
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0245**	**0.3289**	**0.2150**	**1.1300e-003**	**0.0527**	**1.7800e-003**	**0.0545**	**0.0144**	**1.7000e-003**	**0.0161**		**118.3908**	**118.3908**	**6.1800e-003**		**118.5454**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4534	5.3915	2.1154	5.7700e-003		0.2223	0.2223		0.2045	0.2045	0.0000	558.7896	558.7896	0.1807		563.3077
Total	**0.4534**	**5.3915**	**2.1154**	**5.7700e-003**	**0.0000**	**0.2223**	**0.2223**	**0.0000**	**0.2045**	**0.2045**	**0.0000**	**558.7896**	**558.7896**	**0.1807**		**563.3077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0107	0.3191	0.0836	7.8000e-004	0.0180	1.5000e-003	0.0195	5.2300e-003	1.4400e-003	6.6600e-003		83.1074	83.1074	5.0700e-003		83.2342
Worker	0.0138	9.8200e-003	0.1314	3.5000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		35.2834	35.2834	1.1100e-003		35.3112
Total	**0.0245**	**0.3289**	**0.2150**	**1.1300e-003**	**0.0489**	**1.7800e-003**	**0.0507**	**0.0135**	**1.7000e-003**	**0.0152**		**118.3908**	**118.3908**	**6.1800e-003**		**118.5454**

3.9 Building Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9919	0.0000	1.9919	0.3016	0.0000	0.3016			0.0000			0.0000
Off-Road	2.9691	22.5106	25.7678	0.0404		1.4016	1.4016		1.3709	1.3709		3,845.7739	3,845.7739	0.5617		3,859.8175
Total	**2.9691**	**22.5106**	**25.7678**	**0.0404**	**1.9919**	**1.4016**	**3.3935**	**0.3016**	**1.3709**	**1.6725**		**3,845.7739**	**3,845.7739**	**0.5617**		**3,859.8175**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1286	4.2347	0.9384	0.0116	0.2575	0.0135	0.2710	0.0706	0.0129	0.0835		1,260.4069	1,260.4069	0.0858		1,262.5516
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		235.2226	235.2226	7.4200e-003		235.4080
Total	**0.2278**	**4.5129**	**1.8698**	**0.0145**	**0.4939**	**0.0164**	**0.5102**	**0.1336**	**0.0156**	**0.1492**		**1,551.0344**	**1,551.0344**	**0.0966**		**1,553.4491**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8516	0.0000	0.8516	0.1289	0.0000	0.1289			0.0000			0.0000
Off-Road	2.9691	22.5106	25.7678	0.0404		1.4016	1.4016		1.3709	1.3709	0.0000	3,845.7739	3,845.7739	0.5617		3,859.8175
Total	**2.9691**	**22.5106**	**25.7678**	**0.0404**	**0.8516**	**1.4016**	**2.2531**	**0.1289**	**1.3709**	**1.4999**	**0.0000**	**3,845.7739**	**3,845.7739**	**0.5617**		**3,859.8175**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1286	4.2347	0.9384	0.0116	0.2400	0.0135	0.2535	0.0663	0.0129	0.0792		1,260.4069	1,260.4069	0.0858		1,262.5516
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0120	1.0000e-003	0.0130	3.4800e-003	9.6000e-004	4.4400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.0920	0.0655	0.8757	2.3600e-003	0.2061	1.8700e-003	0.2079	0.0550	1.7200e-003	0.0567		235.2226	235.2226	7.4200e-003		235.4080
Total	**0.2278**	**4.5129**	**1.8698**	**0.0145**	**0.4580**	**0.0164**	**0.4744**	**0.1248**	**0.0156**	**0.1404**		**1,551.0344**	**1,551.0344**	**0.0966**		**1,553.4491**

Phase 1 Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	70.75	1000sqft	21.09	70,754.00	0
Parking Lot	45.00	Space	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Assumes 1 crane for temporary portables installation.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips.

Off-road Equipment - Assumes use of one crane.

Off-road Equipment - Based on information provided by the District.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District.

Architectural Coating -

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	370.00	259.00
tblConstructionPhase	NumDays	20.00	21.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	10.00	44.00
tblConstructionPhase	NumDays	370.00	45.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	10/10/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	8/15/2019	3/12/2020
tblConstructionPhase	PhaseEndDate	1/11/2018	1/14/2019
tblConstructionPhase	PhaseEndDate	9/12/2019	5/12/2020
tblConstructionPhase	PhaseEndDate	1/25/2018	3/16/2019
tblConstructionPhase	PhaseStartDate	9/13/2019	1/12/2020
tblConstructionPhase	PhaseStartDate	3/16/2018	3/17/2019

tblConstructionPhase	PhaseStartDate	12/15/2017	12/15/2018
tblConstructionPhase	PhaseStartDate	8/16/2019	3/13/2020
tblConstructionPhase	PhaseStartDate	1/12/2018	1/15/2019
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	LotAcreage	1.62	21.09
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	69.00	111.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	HaulingTripNumber	202.00	324.00
tblTripsAndVMT	VendorTripNumber	15.00	25.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	15.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	WorkerTripNumber	37.00	3.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.6635	27.9709	26.5958	0.0464	1.1070	1.8039	2.9109	0.2121	1.7717	1.9838	0.0000	4,530.389	4,530.3891	0.6235	0.0000	4,545.977
2019	3.7807	39.1936	30.9154	0.0665	1.1204	1.7614	2.6556	0.2290	1.6598	1.8281	0.0000	6,488.807	6,488.8076	1.4477	0.0000	6,524.999
2020	18.3041	32.1611	30.0540	0.0634	2.4858	1.4338	3.9040	0.4352	1.3868	1.8219	0.0000	6,098.071	6,098.0715	1.2759	0.0000	6,129.970
Maximum	**18.3041**	**39.1936**	**30.9154**	**0.0665**	**2.4858**	**1.8039**	**3.9040**	**0.4352**	**1.7717**	**1.9838**	**0.0000**	**6,488.807**	**6,488.8076**	**1.4477**	**0.0000**	**6,524.999**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	3.6635	27.9709	26.5958	0.0464	0.6675	1.8039	2.4714	0.1427	1.7717	1.9144	0.0000	4,530.389	4,530.3891	0.6235	0.0000	4,545.977
2019	3.7807	39.1936	30.9154	0.0665	0.7796	1.7614	2.3353	0.2123	1.6598	1.8168	0.0000	6,488.807	6,488.8076	1.4477	0.0000	6,524.999
2020	18.3041	32.1611	30.0540	0.0634	1.3096	1.4338	2.7278	0.2537	1.3868	1.6405	0.0000	6,098.071	6,098.0715	1.2759	0.0000	6,129.970
Maximum	**18.3041**	**39.1936**	**30.9154**	**0.0665**	**1.3096**	**1.8039**	**2.7278**	**0.2537**	**1.7717**	**1.9144**	**0.0000**	**6,488.8076**	**6,488.8076**	**1.4477**	**0.0000**	**6,524.9998**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**41.51**	**0.00**	**20.44**	**30.54**	**0.00**	**4.65**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	12/15/2018	1/14/2019	5	21	
2	Site Preparation	Site Preparation	1/15/2019	3/16/2019	5	44	
3	Building Construction	Building Construction	3/17/2019	3/12/2020	5	259	
4	Temporary Portables Installation	Building Construction	3/17/2019	5/17/2019	5	45	
5	Architectural Coating	Architectural Coating	1/12/2020	3/12/2020	5	44	
6	Paving	Paving	3/13/2020	5/12/2020	5	43	
7	Temporary Portables Removal	Demolition	5/13/2020	5/20/2020	5	6	
8	Building Demolition	Demolition	5/21/2020	6/20/2020	5	22	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.41

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 106,131; Non-Residential Outdoor: 35,377; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Asphalt Demolition	Excavators	1	8.00	158	0.38
Asphalt Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20

Building Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Asphalt Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Temporary Portables Installation	Cranes	1	8.00	231	0.29
Temporary Portables Removal	Excavators	0	8.00	158	0.38
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Excavators	1	8.00	158	0.38
Building Construction	Welders	0	8.00	46	0.45
Temporary Portables Installation	Forklifts	0	8.00	89	0.20
Temporary Portables Installation	Generator Sets	0	8.00	84	0.74
Temporary Portables Removal	Rubber Tired Dozers	0	8.00	247	0.40
Building Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Temporary Portables Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Temporary Portables Installation	Welders	0	8.00	46	0.45
Asphalt Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Asphalt Demolition	Skid Steer Loaders	1	8.00	65	0.37
Asphalt Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Asphalt Demolition	Air Compressors	2	8.00	78	0.48
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rollers	2	8.00	80	0.38
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction	Air Compressors	1	8.00	78	0.48

Building Construction	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction	Pumps	1	8.00	84	0.74
Building Construction	Rough Terrain Forklifts	4	8.00	100	0.40
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Building Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Building Demolition	Air Compressors	2	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	15	37.00	25.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition	8	20.00	2.00	111.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Installation	1	3.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Demolition	8	20.00	2.00	324.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7147	0.0000	0.7147	0.1082	0.0000	0.1082			0.0000			0.0000
Off-Road	3.4778	25.9019	25.1496	0.0393		1.7935	1.7935		1.7618	1.7618		3,784.3635	3,784.3635	0.5776		3,798.8028
Total	**3.4778**	**25.9019**	**25.1496**	**0.0393**	**0.7147**	**1.7935**	**2.5082**	**0.1082**	**1.7618**	**1.8701**		**3,784.3635**	**3,784.3635**	**0.5776**		**3,798.8028**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0538	1.7310	0.3780	4.2100e-003	0.1559	6.6200e-003	0.1626	0.0409	6.3400e-003	0.0473		455.0805	455.0805	0.0331		455.9082
Vendor	9.5900e-003	0.2457	0.0737	5.1000e-004	0.0128	1.7500e-003	0.0146	3.6900e-003	1.6800e-003	5.3700e-003		54.8300	54.8300	3.9600e-003		54.9289
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2236	1.9900e-003	0.2256	0.0593	1.8400e-003	0.0611		236.1152	236.1152	8.8900e-003		236.3373
Total	**0.1857**	**2.0690**	**1.4462**	**7.0900e-003**	**0.3923**	**0.0104**	**0.4027**	**0.1039**	**9.8600e-003**	**0.1138**		**746.0257**	**746.0257**	**0.0460**		**747.1744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3056	0.0000	0.3056	0.0463	0.0000	0.0463			0.0000			0.0000
Off-Road	3.4778	25.9019	25.1496	0.0393		1.7935	1.7935		1.7618	1.7618	0.0000	3,784.3635	3,784.3635	0.5776		3,798.8028
Total	**3.4778**	**25.9019**	**25.1496**	**0.0393**	**0.3056**	**1.7935**	**2.0990**	**0.0463**	**1.7618**	**1.8081**	**0.0000**	**3,784.3635**	**3,784.3635**	**0.5776**		**3,798.8028**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0538	1.7310	0.3780	4.2100e-003	0.1439	6.6200e-003	0.1506	0.0380	6.3400e-003	0.0443		455.0805	455.0805	0.0331		455.9082
Vendor	9.5900e-003	0.2457	0.0737	5.1000e-004	0.0120	1.7500e-003	0.0137	3.4800e-003	1.6800e-003	5.1600e-003		54.8300	54.8300	3.9600e-003		54.9289
Worker	0.1223	0.0923	0.9945	2.3700e-003	0.2061	1.9900e-003	0.2081	0.0550	1.8400e-003	0.0568		236.1152	236.1152	8.8900e-003		236.3373
Total	**0.1857**	**2.0690**	**1.4462**	**7.0900e-003**	**0.3620**	**0.0104**	**0.3724**	**0.0965**	**9.8600e-003**	**0.1063**		**746.0257**	**746.0257**	**0.0460**		**747.1744**

3.2 Asphalt Demolition - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7147	0.0000	0.7147	0.1082	0.0000	0.1082			0.0000			0.0000
Off-Road	3.1093	23.4725	24.9826	0.0393		1.5258	1.5258		1.4988	1.4988		3,767.3986	3,767.3986	0.5485		3,781.1114
Total	**3.1093**	**23.4725**	**24.9826**	**0.0393**	**0.7147**	**1.5258**	**2.2405**	**0.1082**	**1.4988**	**1.6071**		**3,767.3986**	**3,767.3986**	**0.5485**		**3,781.1114**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0509	1.6405	0.3685	4.1500e-003	0.1693	6.0500e-003	0.1753	0.0442	5.7900e-003	0.0500		449.2063	449.2063	0.0327		450.0230
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2236	1.9300e-003	0.2255	0.0593	1.7800e-003	0.0611		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.1703**	**1.9536**	**1.3212**	**6.9500e-003**	**0.4056**	**9.4800e-003**	**0.4151**	**0.1072**	**9.0000e-003**	**0.1162**		**731.8878**	**731.8878**	**0.0443**		**732.9963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3056	0.0000	0.3056	0.0463	0.0000	0.0463			0.0000			0.0000
Off-Road	3.1093	23.4725	24.9826	0.0393		1.5258	1.5258		1.4988	1.4988	0.0000	3,767.3986	3,767.3986	0.5485		3,781.1114
Total	**3.1093**	**23.4725**	**24.9826**	**0.0393**	**0.3056**	**1.5258**	**1.8313**	**0.0463**	**1.4988**	**1.5451**	**0.0000**	**3,767.3986**	**3,767.3986**	**0.5485**		**3,781.1114**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0509	1.6405	0.3685	4.1500e-003	0.1561	6.0500e-003	0.1621	0.0410	5.7900e-003	0.0468		449.2063	449.2063	0.0327		450.0230
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0120	1.5000e-003	0.0135	3.4800e-003	1.4300e-003	4.9200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.1108	0.0813	0.8850	2.2900e-003	0.2061	1.9300e-003	0.2080	0.0550	1.7800e-003	0.0568		228.4262	228.4262	7.8600e-003		228.6226
Total	**0.1703**	**1.9536**	**1.3212**	**6.9500e-003**	**0.3741**	**9.4800e-003**	**0.3836**	**0.0994**	**9.0000e-003**	**0.1084**		**731.8878**	**731.8878**	**0.0443**		**732.9963**

3.3 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0277	0.0000	0.0277	4.2000e-003	0.0000	4.2000e-003			0.0000			0.0000
Off-Road	1.6539	16.0070	14.5327	0.0205		1.0420	1.0420		0.9594	0.9594		2,013.9098	2,013.9098	0.6299		2,029.6560
Total	**1.6539**	**16.0070**	**14.5327**	**0.0205**	**0.0277**	**1.0420**	**1.0697**	**4.2000e-003**	**0.9594**	**0.9636**		**2,013.9098**	**2,013.9098**	**0.6299**		**2,029.6560**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3371	10.8630	2.4400	0.0275	0.6119	0.0401	0.6520	0.1677	0.0383	0.2061		2,974.4739	2,974.4739	0.2163		2,979.8820
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.4455**	**11.1679**	**3.3042**	**0.0301**	**0.8259**	**0.0433**	**0.8692**	**0.2248**	**0.0414**	**0.2662**		**3,234.3129**	**3,234.3129**	**0.2272**		**3,239.9930**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0118	0.0000	0.0118	1.7900e-003	0.0000	1.7900e-003			0.0000			0.0000
Off-Road	1.6539	16.0070	14.5327	0.0205		1.0420	1.0420		0.9594	0.9594	0.0000	2,013.9098	2,013.9098	0.6299		2,029.6560
Total	**1.6539**	**16.0070**	**14.5327**	**0.0205**	**0.0118**	**1.0420**	**1.0538**	**1.7900e-003**	**0.9594**	**0.9612**	**0.0000**	**2,013.9098**	**2,013.9098**	**0.6299**		**2,029.6560**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3371	10.8630	2.4400	0.0275	0.5703	0.0401	0.6104	0.1575	0.0383	0.1959		2,974.4739	2,974.4739	0.2163		2,979.8820
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0120	1.5000e-003	0.0135	3.4800e-003	1.4300e-003	4.9200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0997	0.0732	0.7965	2.0700e-003	0.1855	1.7300e-003	0.1872	0.0495	1.6000e-003	0.0511		205.5836	205.5836	7.0700e-003		205.7604
Total	**0.4455**	**11.1679**	**3.3042**	**0.0301**	**0.7677**	**0.0433**	**0.8110**	**0.2105**	**0.0414**	**0.2519**		**3,234.3129**	**3,234.3129**	**0.2272**		**3,239.9930**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9382	29.8950	25.9386	0.0492		1.4827	1.4827		1.4026	1.4026		4,728.2965	4,728.2965	1.1998		4,758.2914
Total	**2.9382**	**29.8950**	**25.9386**	**0.0492**		**1.4827**	**1.4827**		**1.4026**	**1.4026**		**4,728.2965**	**4,728.2965**	**1.1998**		**4,758.2914**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1084	2.8971	0.8462	6.3600e-003	0.1601	0.0188	0.1788	0.0461	0.0179	0.0640		678.1928	678.1928	0.0476		679.3838
Worker	0.2049	0.1504	1.6372	4.2400e-003	0.4136	3.5700e-003	0.4171	0.1097	3.2900e-003	0.1130		422.5884	422.5884	0.0145		422.9518
Total	**0.3133**	**3.0476**	**2.4834**	**0.0106**	**0.5736**	**0.0223**	**0.5959**	**0.1558**	**0.0212**	**0.1770**		**1,100.7812**	**1,100.7812**	**0.0622**		**1,102.3357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9382	29.8950	25.9386	0.0492		1.4827	1.4827		1.4026	1.4026	0.0000	4,728.2965	4,728.2965	1.1998		4,758.2914
Total	**2.9382**	**29.8950**	**25.9386**	**0.0492**		**1.4827**	**1.4827**		**1.4026**	**1.4026**	**0.0000**	**4,728.2965**	**4,728.2965**	**1.1998**		**4,758.2914**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1084	2.8971	0.8462	6.3600e-003	0.1498	0.0188	0.1685	0.0436	0.0179	0.0615		678.1928	678.1928	0.0476		679.3838
Worker	0.2049	0.1504	1.6372	4.2400e-003	0.3812	3.5700e-003	0.3848	0.1017	3.2900e-003	0.1050		422.5884	422.5884	0.0145		422.9518
Total	**0.3133**	**3.0476**	**2.4834**	**0.0106**	**0.5310**	**0.0223**	**0.5533**	**0.1453**	**0.0212**	**0.1665**		**1,100.7812**	**1,100.7812**	**0.0622**		**1,102.3357**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357		4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**		**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0930	2.6588	0.7685	6.3100e-003	0.1601	0.0127	0.1728	0.0461	0.0122	0.0582		673.6227	673.6227	0.0450		674.7488
Worker	0.1891	0.1341	1.4837	4.1100e-003	0.4136	3.4600e-003	0.4170	0.1097	3.1900e-003	0.1129		409.7455	409.7455	0.0129		410.0684
Total	**0.2820**	**2.7929**	**2.2522**	**0.0104**	**0.5736**	**0.0162**	**0.5898**	**0.1558**	**0.0154**	**0.1711**		**1,083.3682**	**1,083.3682**	**0.0580**		**1,084.8172**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357	0.0000	4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**	**0.0000**	**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0930	2.6588	0.7685	6.3100e-003	0.1498	0.0127	0.1625	0.0436	0.0122	0.0557		673.6227	673.6227	0.0450		674.7488
Worker	0.1891	0.1341	1.4837	4.1100e-003	0.3812	3.4600e-003	0.3847	0.1017	3.1900e-003	0.1049		409.7455	409.7455	0.0129		410.0684
Total	**0.2820**	**2.7929**	**2.2522**	**0.0104**	**0.5310**	**0.0162**	**0.5472**	**0.1453**	**0.0154**	**0.1607**		**1,083.3682**	**1,083.3682**	**0.0580**		**1,084.8172**

3.5 Temporary Portables Installation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5040	6.0070	2.2930	5.7700e-003		0.2546	0.2546		0.2343	0.2343		571.2106	571.2106	0.1807		575.7287
Total	**0.5040**	**6.0070**	**2.2930**	**5.7700e-003**		**0.2546**	**0.2546**		**0.2343**	**0.2343**		**571.2106**	**571.2106**	**0.1807**		**575.7287**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0128	1.5000e-003	0.0143	3.6900e-003	1.4300e-003	5.1200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0166	0.0122	0.1327	3.4000e-004	0.0335	2.9000e-004	0.0338	8.8900e-003	2.7000e-004	9.1600e-003		34.2639	34.2639	1.1800e-003		34.2934
Total	**0.0253**	**0.2440**	**0.2004**	**8.5000e-004**	**0.0463**	**1.7900e-003**	**0.0481**	**0.0126**	**1.7000e-003**	**0.0143**		**88.5193**	**88.5193**	**4.9900e-003**		**88.6441**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5040	6.0070	2.2930	5.7700e-003		0.2546	0.2546		0.2343	0.2343	0.0000	571.2106	571.2106	0.1807		575.7287
Total	**0.5040**	**6.0070**	**2.2930**	**5.7700e-003**		**0.2546**	**0.2546**		**0.2343**	**0.2343**	**0.0000**	**571.2106**	**571.2106**	**0.1807**		**575.7287**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.2318	0.0677	5.1000e-004	0.0120	1.5000e-003	0.0135	3.4800e-003	1.4300e-003	4.9200e-003		54.2554	54.2554	3.8100e-003		54.3507
Worker	0.0166	0.0122	0.1327	3.4000e-004	0.0309	2.9000e-004	0.0312	8.2500e-003	2.7000e-004	8.5200e-003		34.2639	34.2639	1.1800e-003		34.2934
Total	**0.0253**	**0.2440**	**0.2004**	**8.5000e-004**	**0.0429**	**1.7900e-003**	**0.0447**	**0.0117**	**1.7000e-003**	**0.0134**		**88.5193**	**88.5193**	**4.9900e-003**		**88.6441**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**15.2625**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0254	0.2807	7.8000e-004	0.0782	6.5000e-004	0.0789	0.0208	6.0000e-004	0.0214		77.5194	77.5194	2.4400e-003		77.5805
Total	**0.0358**	**0.0254**	**0.2807**	**7.8000e-004**	**0.0782**	**6.5000e-004**	**0.0789**	**0.0208**	**6.0000e-004**	**0.0214**		**77.5194**	**77.5194**	**2.4400e-003**		**77.5805**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.0204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**15.2625**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0358	0.0254	0.2807	7.8000e-004	0.0721	6.5000e-004	0.0728	0.0193	6.0000e-004	0.0199		77.5194	77.5194	2.4400e-003		77.5805
Total	**0.0358**	**0.0254**	**0.2807**	**7.8000e-004**	**0.0721**	**6.5000e-004**	**0.0728**	**0.0193**	**6.0000e-004**	**0.0199**		**77.5194**	**77.5194**	**2.4400e-003**		**77.5805**

3.7 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3599	12.0472	11.8187	0.0192		0.6500	0.6500		0.6072	0.6072		1,715.0061	1,715.0061	0.4659		1,726.6541
Paving	0.0250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3849**	**12.0472**	**11.8187**	**0.0192**		**0.6500**	**0.6500**		**0.6072**	**0.6072**		**1,715.0061**	**1,715.0061**	**0.4659**		**1,726.6541**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0669	1.9143	0.5533	4.5400e-003	0.1152	9.1600e-003	0.1244	0.0332	8.7600e-003	0.0419		485.0083	485.0083	0.0324		485.8191
Worker	0.1533	0.1087	1.2030	3.3400e-003	0.3353	2.8000e-003	0.3381	0.0889	2.5800e-003	0.0915		332.2261	332.2261	0.0105		332.4879
Total	**0.2202**	**2.0231**	**1.7563**	**7.8800e-003**	**0.4506**	**0.0120**	**0.4625**	**0.1221**	**0.0113**	**0.1335**		**817.2344**	**817.2344**	**0.0429**		**818.3070**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3599	12.0472	11.8187	0.0192		0.6500	0.6500		0.6072	0.6072	0.0000	1,715.0061	1,715.0061	0.4659		1,726.6541
Paving	0.0250					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3849**	**12.0472**	**11.8187**	**0.0192**		**0.6500**	**0.6500**		**0.6072**	**0.6072**	**0.0000**	**1,715.0061**	**1,715.0061**	**0.4659**		**1,726.6541**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0669	1.9143	0.5533	4.5400e-003	0.1079	9.1600e-003	0.1170	0.0314	8.7600e-003	0.0401		485.0083	485.0083	0.0324		485.8191
Worker	0.1533	0.1087	1.2030	3.3400e-003	0.3091	2.8000e-003	0.3119	0.0825	2.5800e-003	0.0851		332.2261	332.2261	0.0105		332.4879
Total	**0.2202**	**2.0231**	**1.7563**	**7.8800e-003**	**0.4169**	**0.0120**	**0.4289**	**0.1139**	**0.0113**	**0.1252**		**817.2344**	**817.2344**	**0.0429**		**818.3070**

3.8 Temporary Portables Removal - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4534	5.3915	2.1154	5.7700e-003		0.2223	0.2223		0.2045	0.2045		558.7896	558.7896	0.1807		563.3077
Total	**0.4534**	**5.3915**	**2.1154**	**5.7700e-003**	**0.0000**	**0.2223**	**0.2223**	**0.0000**	**0.2045**	**0.2045**		**558.7896**	**558.7896**	**0.1807**		**563.3077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0112	0.3191	0.0922	7.6000e-004	0.0192	1.5300e-003	0.0207	5.5300e-003	1.4600e-003	6.9900e-003		80.8347	80.8347	5.4100e-003		80.9699
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0265**	**0.3299**	**0.2125**	**1.0900e-003**	**0.0527**	**1.8100e-003**	**0.0545**	**0.0144**	**1.7200e-003**	**0.0161**		**114.0573**	**114.0573**	**6.4600e-003**		**114.2186**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4534	5.3915	2.1154	5.7700e-003		0.2223	0.2223		0.2045	0.2045	0.0000	558.7896	558.7896	0.1807		563.3077
Total	**0.4534**	**5.3915**	**2.1154**	**5.7700e-003**	**0.0000**	**0.2223**	**0.2223**	**0.0000**	**0.2045**	**0.2045**	**0.0000**	**558.7896**	**558.7896**	**0.1807**		**563.3077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0112	0.3191	0.0922	7.6000e-004	0.0180	1.5300e-003	0.0195	5.2300e-003	1.4600e-003	6.6900e-003		80.8347	80.8347	5.4100e-003		80.9699
Worker	0.0153	0.0109	0.1203	3.3000e-004	0.0309	2.8000e-004	0.0312	8.2500e-003	2.6000e-004	8.5100e-003		33.2226	33.2226	1.0500e-003		33.2488
Total	**0.0265**	**0.3299**	**0.2125**	**1.0900e-003**	**0.0489**	**1.8100e-003**	**0.0507**	**0.0135**	**1.7200e-003**	**0.0152**		**114.0573**	**114.0573**	**6.4600e-003**		**114.2186**

3.9 Building Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9919	0.0000	1.9919	0.3016	0.0000	0.3016			0.0000			0.0000
Off-Road	2.9691	22.5106	25.7678	0.0404		1.4016	1.4016		1.3709	1.3709		3,845.7739	3,845.7739	0.5617		3,859.8175
Total	**2.9691**	**22.5106**	**25.7678**	**0.0404**	**1.9919**	**1.4016**	**3.3935**	**0.3016**	**1.3709**	**1.6725**		**3,845.7739**	**3,845.7739**	**0.5617**		**3,859.8175**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1318	4.2895	0.9973	0.0114	0.2575	0.0137	0.2712	0.0706	0.0131	0.0837		1,238.7022	1,238.7022	0.0889		1,240.9249
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.2236	1.8700e-003	0.2254	0.0593	1.7200e-003	0.0610		221.4841	221.4841	6.9800e-003		221.6586
Total	**0.2414**	**4.5747**	**1.8608**	**0.0142**	**0.4939**	**0.0166**	**0.5105**	**0.1336**	**0.0158**	**0.1494**		**1,514.0761**	**1,514.0761**	**0.0995**		**1,516.5634**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8516	0.0000	0.8516	0.1289	0.0000	0.1289			0.0000			0.0000
Off-Road	2.9691	22.5106	25.7678	0.0404		1.4016	1.4016		1.3709	1.3709	0.0000	3,845.7739	3,845.7739	0.5617		3,859.8175
Total	**2.9691**	**22.5106**	**25.7678**	**0.0404**	**0.8516**	**1.4016**	**2.2531**	**0.1289**	**1.3709**	**1.4999**	**0.0000**	**3,845.7739**	**3,845.7739**	**0.5617**		**3,859.8175**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1318	4.2895	0.9973	0.0114	0.2400	0.0137	0.2537	0.0663	0.0131	0.0794		1,238.7022	1,238.7022	0.0889		1,240.9249
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0120	1.0200e-003	0.0130	3.4800e-003	9.7000e-004	4.4600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.1022	0.0725	0.8020	2.2200e-003	0.2061	1.8700e-003	0.2079	0.0550	1.7200e-003	0.0567		221.4841	221.4841	6.9800e-003		221.6586
Total	**0.2414**	**4.5747**	**1.8608**	**0.0142**	**0.4580**	**0.0166**	**0.4746**	**0.1248**	**0.0158**	**0.1406**		**1,514.0761**	**1,514.0761**	**0.0995**		**1,516.5634**

Phase 1 Construction

Los Angeles-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Installation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	6	No Change	0.00
Excavators	Diesel	No Change	0	3	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	0	No Change	0.00
Cranes	Diesel	No Change	0	3	No Change	0.00
Forklifts	Diesel	No Change	0	0	No Change	0.00
Bore/Drill Rigs	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00

Rollers	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Generator Sets	Diesel	No Change	0	0	No Change	0.00
Paving Equipment	Diesel	No Change	0	0	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	13	No Change	0.00
Welders	Diesel	No Change	0	0	No Change	0.00
Crushing/Proc. Equipment	Diesel	No Change	0	6	No Change	0.00
Plate Compactors	Diesel	No Change	0	1	No Change	0.00
Pumps	Diesel	No Change	0	1	No Change	0.00
Rough Terrain Forklifts	Diesel	No Change	0	4	No Change	0.00
Skid Steer Loaders	Diesel	No Change	0	1	No Change	0.00
Trenchers	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors	6.55300E-002	4.51980E-001	4.63350E-001	7.50000E-004	3.12300E-002	3.12300E-002	0.00000E+000	6.43420E+001	6.43420E+001	5.32000E-003	0.00000E+000	6.44750E+001
Bore/Drill Rigs	3.61300E-002	4.73680E-001	2.68030E-001	1.21000E-003	1.34700E-002	1.24000E-002	0.00000E+000	1.08523E+002	1.08523E+002	3.44900E-002	0.00000E+000	1.09385E+002
Cement and Mortar Mixers	4.81500E-002	3.01730E-001	2.52730E-001	5.80000E-004	1.17700E-002	1.17700E-002	0.00000E+000	3.75557E+001	3.75557E+001	3.90000E-003	0.00000E+000	3.76532E+001
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	7.66600E-002	9.13240E-001	3.50270E-001	8.90000E-004	3.85300E-002	3.54500E-002	0.00000E+000	7.99932E+001	7.99932E+001	2.54100E-002	0.00000E+000	8.06285E+001
Crushing/Proc. Equipment	3.85500E-002	2.62410E-001	2.81810E-001	4.50000E-004	1.76600E-002	1.76600E-002	0.00000E+000	3.88839E+001	3.88839E+001	3.11000E-003	0.00000E+000	3.89617E+001
Excavators	1.13200E-002	1.15980E-001	1.42070E-001	2.20000E-004	5.60000E-003	5.16000E-003	0.00000E+000	2.01027E+001	2.01027E+001	6.38000E-003	0.00000E+000	2.02622E+001
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.65000E-003	6.04200E-002	6.23100E-002	1.00000E-004	2.94000E-003	2.70000E-003	0.00000E+000	8.87984E+000	8.87984E+000	2.87000E-003	0.00000E+000	8.95164E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	8.80000E-004	5.53000E-003	4.63000E-003	1.00000E-005	2.10000E-004	2.10000E-004	0.00000E+000	6.88140E-001	6.88140E-001	7.00000E-005	0.00000E+000	6.89930E-001

Pumps	5.96800E-002	4.88550E-001	4.89180E-001	8.50000E-004	3.00100E-002	3.00100E-002	0.00000E+000	7.31944E+001	7.31944E+001	4.79000E-003	0.00000E+000	7.33141E+001
Rollers	1.44400E-002	1.43340E-001	1.24630E-001	1.70000E-004	9.33000E-003	8.59000E-003	0.00000E+000	1.53210E+001	1.53210E+001	4.88000E-003	0.00000E+000	1.54431E+001
Rough Terrain Forklifts	7.28500E-002	9.45780E-001	1.19057E+000	1.79000E-003	4.16500E-002	3.83100E-002	0.00000E+000	1.59540E+002	1.59540E+002	5.07000E-002	0.00000E+000	1.60807E+002
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	9.30000E-004	1.23000E-002	1.46100E-002	2.00000E-005	5.80000E-004	5.40000E-004	0.00000E+000	1.96534E+000	1.96534E+000	6.20000E-004	0.00000E+000	1.98075E+000
Tractors/Loaders/Backhoes	8.55700E-002	8.59130E-001	8.69060E-001	1.18000E-003	5.65500E-002	5.20200E-002	0.00000E+000	1.04908E+002	1.04908E+002	3.34100E-002	0.00000E+000	1.05743E+002
Trenchers	9.56000E-003	8.61800E-002	5.80600E-002	7.00000E-005	6.52000E-003	5.99000E-003	0.00000E+000	6.66307E+000	6.66307E+000	2.11000E-003	0.00000E+000	6.71577E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	6.55300E-002	4.51980E-001	4.63350E-001	7.50000E-004	3.12300E-002	3.12300E-002	0.00000E+000	6.43419E+001	6.43419E+001	5.32000E-003	0.00000E+000	6.44749E+001
Bore/Drill Rigs	3.61300E-002	4.73680E-001	2.68030E-001	1.21000E-003	1.34700E-002	1.24000E-002	0.00000E+000	1.08523E+002	1.08523E+002	3.44900E-002	0.00000E+000	1.09385E+002
Cement and Mortar Mixers	4.81500E-002	3.01730E-001	2.52730E-001	5.80000E-004	1.17700E-002	1.17700E-002	0.00000E+000	3.75557E+001	3.75557E+001	3.90000E-003	0.00000E+000	3.76532E+001
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	7.66600E-002	9.13230E-001	3.50270E-001	8.90000E-004	3.85300E-002	3.54500E-002	0.00000E+000	7.99931E+001	7.99931E+001	2.54100E-002	0.00000E+000	8.06284E+001
Crushing/Proc. Equipment	3.85500E-002	2.62410E-001	2.81810E-001	4.50000E-004	1.76600E-002	1.76600E-002	0.00000E+000	3.88839E+001	3.88839E+001	3.11000E-003	0.00000E+000	3.89617E+001
Excavators	1.13200E-002	1.15980E-001	1.42070E-001	2.20000E-004	5.60000E-003	5.16000E-003	0.00000E+000	2.01027E+001	2.01027E+001	6.38000E-003	0.00000E+000	2.02622E+001
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.65000E-003	6.04200E-002	6.23100E-002	1.00000E-004	2.94000E-003	2.70000E-003	0.00000E+000	8.87983E+000	8.87983E+000	2.87000E-003	0.00000E+000	8.95163E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	8.80000E-004	5.53000E-003	4.63000E-003	1.00000E-005	2.10000E-004	2.10000E-004	0.00000E+000	6.88140E-001	6.88140E-001	7.00000E-005	0.00000E+000	6.89930E-001
Pumps	5.96800E-002	4.88550E-001	4.89180E-001	8.50000E-004	3.00100E-002	3.00100E-002	0.00000E+000	7.31943E+001	7.31943E+001	4.79000E-003	0.00000E+000	7.33141E+001
Rollers	1.44400E-002	1.43340E-001	1.24630E-001	1.70000E-004	9.33000E-003	8.59000E-003	0.00000E+000	1.53210E+001	1.53210E+001	4.88000E-003	0.00000E+000	1.54430E+001
Rough Terrain Forklifts	7.28500E-002	9.45780E-001	1.19057E+000	1.79000E-003	4.16500E-002	3.83100E-002	0.00000E+000	1.59540E+002	1.59540E+002	5.07000E-002	0.00000E+000	1.60807E+002
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	9.30000E-004	1.23000E-002	1.46100E-002	2.00000E-005	5.80000E-004	5.40000E-004	0.00000E+000	1.96534E+000	1.96534E+000	6.20000E-004	0.00000E+000	1.98075E+000
Tractors/Loaders/Backhoes	8.55700E-002	8.59130E-001	8.69060E-001	1.18000E-003	5.65500E-002	5.20200E-002	0.00000E+000	1.04908E+002	1.04908E+002	3.34100E-002	0.00000E+000	1.05743E+002
Trenchers	9.56000E-003	8.61800E-002	5.80600E-002	7.00000E-005	6.52000E-003	5.99000E-003	0.00000E+000	6.66306E+000	6.66306E+000	2.11000E-003	0.00000E+000	6.71577E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.24336E-006	1.24336E-006	0.00000E+000	0.00000E+000	1.24079E-006
Bore/Drill Rigs	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19790E-006	1.19790E-006	0.00000E+000	0.00000E+000	1.18846E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06508E-006	1.06508E-006	0.00000E+000	0.00000E+000	1.32791E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	1.09500E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12510E-006	1.12510E-006	0.00000E+000	0.00000E+000	1.24026E-006
Crushing/Proc. Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.28588E-006	1.28588E-006	0.00000E+000	0.00000E+000	1.28331E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.94892E-007	9.94892E-007	0.00000E+000	0.00000E+000	9.87058E-007
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12615E-006	1.12615E-006	0.00000E+000	0.00000E+000	1.11711E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22960E-006	1.22960E-006	0.00000E+000	0.00000E+000	1.22759E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.30540E-006	1.30540E-006	0.00000E+000	0.00000E+000	1.29508E-006
Rough Terrain Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19093E-006	1.19093E-006	0.00000E+000	0.00000E+000	1.18154E-006
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.23919E-006	1.23919E-006	0.00000E+000	0.00000E+000	1.13483E-006
Trenchers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.50081E-006	1.50081E-006	0.00000E+000	0.00000E+000	0.00000E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	5.00	PM2.5 Reduction	5.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.08	0.07
Asphalt Demolition	Fugitive Dust	0.01	0.00	0.00	0.00	0.57	0.57
Asphalt Demolition	Roads	0.00	0.00	0.00	0.00	0.08	0.06
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.07	0.02	0.07	0.02	0.07	0.07
Building Demolition	Fugitive Dust	0.02	0.00	0.01	0.00	0.57	0.57
Building Demolition	Roads	0.01	0.00	0.00	0.00	0.07	0.06
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.07	0.07
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.57	0.56
Site Preparation	Roads	0.02	0.00	0.02	0.00	0.07	0.06
Temporary Portables Installation	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Installation	Roads	0.00	0.00	0.00	0.00	0.07	0.07
Temporary Portables Removal	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Removal	Roads	0.00	0.00	0.00	0.00	0.13	0.20

Phase 1 Construction

Los Angeles-South Coast, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	70.75	1000sqft	21.09	70,754.00	0
Parking Lot	45.00	Space	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2020
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Project Characteristics -

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Assumes 1 crane for temporary portables installation.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips

Off-road Equipment - Assumes use of one crane.

Off-road Equipment - Based on information provided by the District.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District

Architectural Coating -

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2018	Demolition	3.6635 W	27.9709 W	26.6501 S	0.0466 S	2.9109 W	1.9838 W	3.6635 W	27.9709 W	26.6501 S	0.0466 S	2.4714 W	1.9144 W
2019	Demolition	3.2796 W	25.4261 W	26.3536 S	0.0465 S	2.6556 W	1.7232 W	3.2796 W	25.4261 W	26.3536 S	0.0465 S	2.2149 W	1.6535 W
2019	Site Preparation	2.0993 W	27.1749 W	17.8369 W	0.0511 S	1.9390 W	1.2298 W	2.0993 W	27.1749 W	17.8369 W	0.0511 S	1.8649 W	1.2131 W
2019	Building Construction	3.2514 W	32.9426 W	28.4903 S	0.0603 S	2.0786 W	1.5796 W	3.2514 W	32.9426 W	28.4903 S	0.0603 S	2.0360 W	1.5691 W
2020	Building Construction	3.0058 W	30.4519 W	28.0064 S	0.0601 S	1.8959 W	1.4068 W	3.0058 W	30.4519 W	28.0064 S	0.0601 S	1.8532 W	1.3964 W
2020	Architectural Coating	15.2983 W	1.7092 W	2.1379 S	3.8000e-003 S	0.1898 S	0.1323 S	15.2983 W	1.7092 W	2.1379 S	3.8000e-003 S	0.1837 S	0.1308 S
2020	Paving	1.6051 W	14.0702 W	13.6339 S	0.0274 S	1.1125 W	0.7406 W	1.6051 W	14.0702 W	13.6339 S	0.0274 S	1.0789 W	0.7324 W
2020	Demolition	3.2105 W	27.0853 W	27.6376 S	0.0549 S	3.9040 W	1.8219 W	3.2105 W	27.0853 W	27.6376 S	0.0549 S	2.7278 W	1.6405 W
	Peak Daily Total	15.2983 W	32.9426 W	28.4903 S	0.0603 S	3.9040 W	1.9838 W	15.2983 W	32.9426 W	28.4903 S	0.0603 S	2.7278 W	1.9144 W
	Air District Threshold												
	Exceed Significance?												

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

		Unmitigated				Mitigated			
		CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year	MT/yr							
Construction	2018	22.6508	3.1116e-003	0.0000	22.7286	22.6508	3.1116e-003	0.0000	22.7286
Construction	2019	688.3691	0.1418	0.0000	691.9153	688.3685	0.1418	0.0000	691.9147
Construction	2020	248.1227	0.0470	0.0000	249.2971	248.1225	0.0470	0.0000	249.2968
	Total								
	Significance Threshold								
	Exceed Significance?								

Phase 2 Construction

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	44.16	1000sqft	21.04	44,160.00	0
Elementary School	19.90	1000sqft	0.46	19,903.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips.

Off-road Equipment - Assumes use of one crane.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District

Architectural Coating - Based on building size of of HS and ES buildings.

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips

Off-road Equipment -

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	22,080.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	9,952.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	66,240.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	29,855.00
tblAreaCoating	Area_Nonresidential_Exterior	32032	32182
tblAreaCoating	Area_Nonresidential_Interior	96095	96545
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	20.00	6.00

tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	PhaseEndDate	5/26/2022	3/20/2021
tblConstructionPhase	PhaseEndDate	11/23/2021	3/20/2021
tblConstructionPhase	PhaseEndDate	8/17/2020	5/21/2021
tblConstructionPhase	PhaseEndDate	3/25/2022	1/29/2022
tblConstructionPhase	PhaseEndDate	11/25/2020	9/18/2020
tblConstructionPhase	PhaseEndDate	8/25/2020	11/29/2021
tblConstructionPhase	PhaseStartDate	3/26/2022	2/18/2021
tblConstructionPhase	PhaseStartDate	11/26/2020	9/21/2020
tblConstructionPhase	PhaseStartDate	7/20/2020	3/22/2021
tblConstructionPhase	PhaseStartDate	1/26/2022	11/30/2021
tblConstructionPhase	PhaseStartDate	9/25/2020	7/20/2020
tblConstructionPhase	PhaseStartDate	8/18/2020	11/22/2021
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	BuildingSpaceSquareFeet	19,900.00	19,903.00
tblLandUse	LandUseSquareFeet	19,900.00	19,903.00
tblLandUse	LotAcreage	1.01	21.04
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps

tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2022
tblSolidWaste	SolidWasteGenerationRate	57.41	57.80
tblTripsAndVMT	HaulingTripNumber	59.00	94.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblWater	IndoorWaterUseRate	1,466,316.90	1,476,278.29
tblWater	OutdoorWaterUseRate	3,770,529.18	3,796,144.19

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1517	1.6801	1.4082	3.2600e-003	0.0344	0.0708	0.1052	9.3100e-003	0.0665	0.0758	0.0000	290.6173	290.6173	0.0588	0.0000	292.0876
2021	0.6322	3.2127	3.3052	6.7600e-003	0.0589	0.1416	0.2005	0.0153	0.1349	0.1502	0.0000	587.9348	587.9348	0.1213	0.0000	590.9661
2022	0.0135	0.1190	0.1319	2.7000e-004	4.4200e-003	5.0000e-003	9.4200e-003	1.2000e-003	4.6900e-003	5.8900e-003	0.0000	22.8275	22.8275	4.5700e-003	0.0000	22.9417
Maximum	**0.6322**	**3.2127**	**3.3052**	**6.7600e-003**	**0.0589**	**0.1416**	**0.2005**	**0.0153**	**0.1349**	**0.1502**	**0.0000**	**587.9348**	**587.9348**	**0.1213**	**0.0000**	**590.9661**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1517	1.6801	1.4082	3.2600e-003	0.0316	0.0708	0.1024	8.6600e-003	0.0665	0.0751	0.0000	290.6171	290.6171	0.0588	0.0000	292.0873
2021	0.6322	3.2127	3.3052	6.7600e-003	0.0514	0.1416	0.1930	0.0138	0.1349	0.1487	0.0000	587.9343	587.9343	0.1213	0.0000	590.9655
2022	0.0135	0.1190	0.1319	2.7000e-004	4.0900e-003	5.0000e-003	9.0900e-003	1.1200e-003	4.6900e-003	5.8100e-003	0.0000	22.8274	22.8274	4.5700e-003	0.0000	22.9417
Maximum	**0.6322**	**3.2127**	**3.3052**	**6.7600e-003**	**0.0514**	**0.1416**	**0.1930**	**0.0138**	**0.1349**	**0.1487**	**0.0000**	**587.9343**	**587.9343**	**0.1213**	**0.0000**	**590.9655**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.88**	**0.00**	**3.37**	**8.69**	**0.00**	**0.96**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**7-20-2020**	**10-19-2020**	0.9264	0.9264
2	**10-20-2020**	**1-19-2021**	1.0623	1.0623
3	**1-20-2021**	**4-19-2021**	1.1088	1.1088
4	**4-20-2021**	**7-19-2021**	0.8751	0.8751
5	**7-20-2021**	**10-19-2021**	0.9859	0.9859
6	**10-20-2021**	**1-19-2022**	0.7085	0.7085
7	**1-20-2022**	**4-19-2022**	0.0472	0.0472
		Highest	1.1088	1.1088

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/20/2020	9/18/2020	5	45	
2	Building Construction HS	Building Construction	9/21/2020	3/20/2021	5	130	
3	Architectural Coating HS	Architectural Coating	2/18/2021	3/20/2021	5	22	
4	Demolition	Demolition	3/22/2021	5/21/2021	5	45	
5	Building Construction ES	Building Construction	5/24/2021	11/20/2021	5	130	
6	Architectural Coating ES	Architectural Coating	10/21/2021	11/19/2021	5	22	
7	Temporary Portables Removal	Demolition	11/22/2021	11/29/2021	5	6	
8	Paving	Paving	11/30/2021	1/29/2022	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,240; Non-Residential Outdoor: 22,080; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating HS	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction HS	Cranes	1	8.00	231	0.29
Building Construction HS	Forklifts	0	8.00	89	0.20
Building Construction HS	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	1	8.00	80	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40
Architectural Coating ES	Air Compressors	1	6.00	78	0.48
Building Construction HS	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction ES	Cranes	1	8.00	231	0.29
Temporary Portables Removal	Excavators	0	8.00	158	0.38
Paving	Paving Equipment	0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction ES	Forklifts	0	8.00	89	0.20
Building Construction HS	Welders	0	8.00	46	0.45
Building Construction ES	Generator Sets	0	8.00	84	0.74
Building Construction ES	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Temporary Portables Removal	Rubber Tired Dozers	0	8.00	247	0.40
Building Construction ES	Welders	0	8.00	46	0.45
Site Preparation	Excavators	1	8.00	158	0.38

Site Preparation	Plate Compactors	1	8.00	8	0.43
Site Preparation	Rollers	2	8.00	80	0.38
Site Preparation	Trenchers	1	8.00	78	0.50
Building Construction HS	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction HS	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction HS	Pumps	1	8.00	84	0.74
Building Construction HS	Rough Terrain Forklifts	4	8.00	100	0.40
Building Construction HS	Air Compressors	1	8.00	78	0.48
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Skid Steer Loaders	1	8.00	65	0.37
Demolition	Crushing/Proc. Equipment	3	8.00	85	0.78
Demolition	Air Compressors	2	8.00	78	0.48
Building Construction ES	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction ES	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction ES	Pumps	1	8.00	84	0.74
Building Construction ES	Rough Terrain Forklifts	4	8.00	100	0.40
Building Construction ES	Air Compressors	1	8.00	78	0.48
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating HS	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction HS	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	8	20.00	2.00	94.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating FS	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction FS	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.1000e-004	0.0000	6.1000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0347	0.3337	0.3254	4.6000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	40.2330	40.2330	0.0129	0.0000	40.5544
Total	**0.0347**	**0.3337**	**0.3254**	**4.6000e-004**	**6.1000e-004**	**0.0212**	**0.0218**	**9.0000e-005**	**0.0195**	**0.0196**	**0.0000**	**40.2330**	**40.2330**	**0.0129**	**0.0000**	**40.5544**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-003	0.2287	0.0504	6.0000e-004	0.0132	7.1000e-004	0.0139	3.6300e-003	6.8000e-004	4.3100e-003	0.0000	59.3502	59.3502	4.1300e-003	0.0000	59.4536
Vendor	1.6000e-004	4.8800e-003	1.3200e-003	1.0000e-005	2.8000e-004	2.0000e-005	3.1000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.1179	1.1179	7.0000e-005	0.0000	1.1197
Worker	1.8700e-003	1.5100e-003	0.0167	5.0000e-005	4.4400e-003	4.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	4.1365	4.1365	1.3000e-004	0.0000	4.1397
Total	**8.8300e-003**	**0.2351**	**0.0684**	**6.6000e-004**	**0.0180**	**7.7000e-004**	**0.0187**	**4.8900e-003**	**7.3000e-004**	**5.6200e-003**	**0.0000**	**64.6046**	**64.6046**	**4.3300e-003**	**0.0000**	**64.7130**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.6000e-004	0.0000	2.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0347	0.3337	0.3254	4.6000e-004		0.0212	0.0212		0.0195	0.0195	0.0000	40.2330	40.2330	0.0129	0.0000	40.5544
Total	**0.0347**	**0.3337**	**0.3254**	**4.6000e-004**	**2.6000e-004**	**0.0212**	**0.0215**	**4.0000e-005**	**0.0195**	**0.0196**	**0.0000**	**40.2330**	**40.2330**	**0.0129**	**0.0000**	**40.5544**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-003	0.2287	0.0504	6.0000e-004	0.0123	7.1000e-004	0.0131	3.4100e-003	6.8000e-004	4.0900e-003	0.0000	59.3502	59.3502	4.1300e-003	0.0000	59.4536
Vendor	1.6000e-004	4.8800e-003	1.3200e-003	1.0000e-005	2.7000e-004	2.0000e-005	2.9000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.1179	1.1179	7.0000e-005	0.0000	1.1197
Worker	1.8700e-003	1.5100e-003	0.0167	5.0000e-005	4.0900e-003	4.0000e-005	4.1300e-003	1.0900e-003	3.0000e-005	1.1300e-003	0.0000	4.1365	4.1365	1.3000e-004	0.0000	4.1397
Total	**8.8300e-003**	**0.2351**	**0.0684**	**6.6000e-004**	**0.0167**	**7.7000e-004**	**0.0175**	**4.5800e-003**	**7.3000e-004**	**5.3200e-003**	**0.0000**	**64.6046**	**64.6046**	**4.3300e-003**	**0.0000**	**64.7130**

3.3 Building Construction HS - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1008	1.0234	0.9505	1.8200e-003		0.0483	0.0483		0.0457	0.0457	0.0000	156.2737	156.2737	0.0401	0.0000	157.2754
Total	**0.1008**	**1.0234**	**0.9505**	**1.8200e-003**		**0.0483**	**0.0483**		**0.0457**	**0.0457**	**0.0000**	**156.2737**	**156.2737**	**0.0401**	**0.0000**	**157.2754**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8200e-003	0.0842	0.0228	2.0000e-004	4.8900e-003	3.9000e-004	5.2900e-003	1.4100e-003	3.7000e-004	1.7900e-003	0.0000	19.3027	19.3027	1.2300e-003	0.0000	19.3334
Worker	4.6100e-003	3.7200e-003	0.0411	1.1000e-004	0.0110	9.0000e-005	0.0110	2.9100e-003	9.0000e-005	2.9900e-003	0.0000	10.2033	10.2033	3.2000e-004	0.0000	10.2113
Total	**7.4300e-003**	**0.0879**	**0.0639**	**3.1000e-004**	**0.0158**	**4.8000e-004**	**0.0163**	**4.3200e-003**	**4.6000e-004**	**4.7800e-003**	**0.0000**	**29.5060**	**29.5060**	**1.5500e-003**	**0.0000**	**29.5447**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1008	1.0234	0.9505	1.8200e-003		0.0483	0.0483		0.0457	0.0457	0.0000	156.2735	156.2735	0.0401	0.0000	157.2752
Total	**0.1008**	**1.0234**	**0.9505**	**1.8200e-003**		**0.0483**	**0.0483**		**0.0457**	**0.0457**	**0.0000**	**156.2735**	**156.2735**	**0.0401**	**0.0000**	**157.2752**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8200e-003	0.0842	0.0228	2.0000e-004	4.5800e-003	3.9000e-004	4.9700e-003	1.3400e-003	3.7000e-004	1.7100e-003	0.0000	19.3027	19.3027	1.2300e-003	0.0000	19.3334
Worker	4.6100e-003	3.7200e-003	0.0411	1.1000e-004	0.0101	9.0000e-005	0.0102	2.7000e-003	9.0000e-005	2.7800e-003	0.0000	10.2033	10.2033	3.2000e-004	0.0000	10.2113
Total	**7.4300e-003**	**0.0879**	**0.0639**	**3.1000e-004**	**0.0147**	**4.8000e-004**	**0.0152**	**4.0400e-003**	**4.6000e-004**	**4.4900e-003**	**0.0000**	**29.5060**	**29.5060**	**1.5500e-003**	**0.0000**	**29.5447**

3.3 Building Construction HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0701	0.7056	0.7129	1.3800e-003		0.0318	0.0318		0.0301	0.0301	0.0000	118.3329	118.3329	0.0302	0.0000	119.0873
Total	**0.0701**	**0.7056**	**0.7129**	**1.3800e-003**		**0.0318**	**0.0318**		**0.0301**	**0.0301**	**0.0000**	**118.3329**	**118.3329**	**0.0302**	**0.0000**	**119.0873**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8300e-003	0.0580	0.0157	1.5000e-004	3.7000e-003	1.2000e-004	3.8200e-003	1.0700e-003	1.1000e-004	1.1800e-003	0.0000	14.4940	14.4940	8.9000e-004	0.0000	14.5162
Worker	3.2500e-003	2.5300e-003	0.0286	8.0000e-005	8.2800e-003	7.0000e-005	8.3500e-003	2.2000e-003	6.0000e-005	2.2600e-003	0.0000	7.4762	7.4762	2.2000e-004	0.0000	7.4817
Total	**5.0800e-003**	**0.0606**	**0.0443**	**2.3000e-004**	**0.0120**	**1.9000e-004**	**0.0122**	**3.2700e-003**	**1.7000e-004**	**3.4400e-003**	**0.0000**	**21.9702**	**21.9702**	**1.1100e-003**	**0.0000**	**21.9979**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0701	0.7056	0.7129	1.3800e-003		0.0318	0.0318		0.0301	0.0301	0.0000	118.3327	118.3327	0.0302	0.0000	119.0872
Total	**0.0701**	**0.7056**	**0.7129**	**1.3800e-003**		**0.0318**	**0.0318**		**0.0301**	**0.0301**	**0.0000**	**118.3327**	**118.3327**	**0.0302**	**0.0000**	**119.0872**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8300e-003	0.0580	0.0157	1.5000e-004	3.4700e-003	1.2000e-004	3.5900e-003	1.0100e-003	1.1000e-004	1.1200e-003	0.0000	14.4940	14.4940	8.9000e-004	0.0000	14.5162
Worker	3.2500e-003	2.5300e-003	0.0286	8.0000e-005	7.6400e-003	7.0000e-005	7.7100e-003	2.0400e-003	6.0000e-005	2.1000e-003	0.0000	7.4762	7.4762	2.2000e-004	0.0000	7.4817
Total	**5.0800e-003**	**0.0606**	**0.0443**	**2.3000e-004**	**0.0111**	**1.9000e-004**	**0.0113**	**3.0500e-003**	**1.7000e-004**	**3.2200e-003**	**0.0000**	**21.9702**	**21.9702**	**1.1100e-003**	**0.0000**	**21.9979**

3.4 Architectural Coating HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2047					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4100e-003	0.0168	0.0200	3.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	2.8086	2.8086	1.9000e-004	0.0000	2.8134
Total	**0.2071**	**0.0168**	**0.0200**	**3.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**2.8086**	**2.8086**	**1.9000e-004**	**0.0000**	**2.8134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	2.0800e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5439	0.5439	2.0000e-005	0.0000	0.5443
Total	**2.4000e-004**	**1.8000e-004**	**2.0800e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5439**	**0.5439**	**2.0000e-005**	**0.0000**	**0.5443**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2047					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4100e-003	0.0168	0.0200	3.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	2.8086	2.8086	1.9000e-004	0.0000	2.8134
Total	**0.2071**	**0.0168**	**0.0200**	**3.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**2.8086**	**2.8086**	**1.9000e-004**	**0.0000**	**2.8134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	2.0800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5439	0.5439	2.0000e-005	0.0000	0.5443
Total	**2.4000e-004**	**1.8000e-004**	**2.0800e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5439**	**0.5439**	**2.0000e-005**	**0.0000**	**0.5443**

3.5 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					6.3600e-003	0.0000	6.3600e-003	9.6000e-004	0.0000	9.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0588	0.4410	0.5574	8.8000e-004		0.0255	0.0255		0.0250	0.0250	0.0000	76.4085	76.4085	0.0104	0.0000	76.6696
Total	**0.0588**	**0.4410**	**0.5574**	**8.8000e-004**	**6.3600e-003**	**0.0255**	**0.0318**	**9.6000e-004**	**0.0250**	**0.0260**	**0.0000**	**76.4085**	**76.4085**	**0.0104**	**0.0000**	**76.6696**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-004	0.0130	3.0300e-003	4.0000e-005	8.1000e-004	4.0000e-005	8.5000e-004	2.2000e-004	4.0000e-005	2.6000e-004	0.0000	3.5828	3.5828	2.5000e-004	0.0000	3.5890
Vendor	1.4000e-004	4.4400e-003	1.2000e-003	1.0000e-005	2.8000e-004	1.0000e-005	2.9000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1092	1.1092	7.0000e-005	0.0000	1.1109
Worker	1.9400e-003	1.5100e-003	0.0170	5.0000e-005	4.9300e-003	4.0000e-005	4.9700e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.4501	4.4501	1.3000e-004	0.0000	4.4534
Total	**2.4800e-003**	**0.0190**	**0.0213**	**1.0000e-004**	**6.0200e-003**	**9.0000e-005**	**6.1100e-003**	**1.6100e-003**	**9.0000e-005**	**1.7000e-003**	**0.0000**	**9.1422**	**9.1422**	**4.5000e-004**	**0.0000**	**9.1534**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7200e-003	0.0000	2.7200e-003	4.1000e-004	0.0000	4.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0588	0.4410	0.5574	8.8000e-004		0.0255	0.0255		0.0250	0.0250	0.0000	76.4084	76.4084	0.0104	0.0000	76.6695
Total	**0.0588**	**0.4410**	**0.5574**	**8.8000e-004**	**2.7200e-003**	**0.0255**	**0.0282**	**4.1000e-004**	**0.0250**	**0.0254**	**0.0000**	**76.4084**	**76.4084**	**0.0104**	**0.0000**	**76.6695**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-004	0.0130	3.0300e-003	4.0000e-005	7.5000e-004	4.0000e-005	7.9000e-004	2.1000e-004	4.0000e-005	2.5000e-004	0.0000	3.5828	3.5828	2.5000e-004	0.0000	3.5890
Vendor	1.4000e-004	4.4400e-003	1.2000e-003	1.0000e-005	2.7000e-004	1.0000e-005	2.7000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	1.1092	1.1092	7.0000e-005	0.0000	1.1109
Worker	1.9400e-003	1.5100e-003	0.0170	5.0000e-005	4.5500e-003	4.0000e-005	4.5900e-003	1.2200e-003	4.0000e-005	1.2500e-003	0.0000	4.4501	4.4501	1.3000e-004	0.0000	4.4534
Total	**2.4800e-003**	**0.0190**	**0.0213**	**1.0000e-004**	**5.5700e-003**	**9.0000e-005**	**5.6500e-003**	**1.5100e-003**	**9.0000e-005**	**1.5900e-003**	**0.0000**	**9.1422**	**9.1422**	**4.5000e-004**	**0.0000**	**9.1534**

3.6 Building Construction ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1628	1.6380	1.6549	3.2000e-003		0.0739	0.0739		0.0699	0.0699	0.0000	274.7013	274.7013	0.0701	0.0000	276.4528
Total	**0.1628**	**1.6380**	**1.6549**	**3.2000e-003**		**0.0739**	**0.0739**		**0.0699**	**0.0699**	**0.0000**	**274.7013**	**274.7013**	**0.0701**	**0.0000**	**276.4528**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2400e-003	0.1347	0.0365	3.5000e-004	8.6000e-003	2.7000e-004	8.8700e-003	2.4800e-003	2.6000e-004	2.7400e-003	0.0000	33.6468	33.6468	2.0600e-003	0.0000	33.6984
Worker	7.5500e-003	5.8800e-003	0.0664	1.9000e-004	0.0192	1.6000e-004	0.0194	5.1100e-003	1.5000e-004	5.2500e-003	0.0000	17.3555	17.3555	5.1000e-004	0.0000	17.3683
Total	**0.0118**	**0.1406**	**0.1029**	**5.4000e-004**	**0.0278**	**4.3000e-004**	**0.0283**	**7.5900e-003**	**4.1000e-004**	**7.9900e-003**	**0.0000**	**51.0023**	**51.0023**	**2.5700e-003**	**0.0000**	**51.0666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1628	1.6380	1.6549	3.2000e-003		0.0739	0.0739		0.0699	0.0699	0.0000	274.7010	274.7010	0.0701	0.0000	276.4524
Total	**0.1628**	**1.6380**	**1.6549**	**3.2000e-003**		**0.0739**	**0.0739**		**0.0699**	**0.0699**	**0.0000**	**274.7010**	**274.7010**	**0.0701**	**0.0000**	**276.4524**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.2400e-003	0.1347	0.0365	3.5000e-004	8.0500e-003	2.7000e-004	8.3300e-003	2.3500e-003	2.6000e-004	2.6100e-003	0.0000	33.6468	33.6468	2.0600e-003	0.0000	33.6984
Worker	7.5500e-003	5.8800e-003	0.0664	1.9000e-004	0.0177	1.6000e-004	0.0179	4.7400e-003	1.5000e-004	4.8900e-003	0.0000	17.3555	17.3555	5.1000e-004	0.0000	17.3683
Total	**0.0118**	**0.1406**	**0.1029**	**5.4000e-004**	**0.0258**	**4.3000e-004**	**0.0262**	**7.0900e-003**	**4.1000e-004**	**7.5000e-003**	**0.0000**	**51.0023**	**51.0023**	**2.5700e-003**	**0.0000**	**51.0666**

3.7 Architectural Coating ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4100e-003	0.0168	0.0200	3.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	2.8086	2.8086	1.9000e-004	0.0000	2.8134
Total	**0.0947**	**0.0168**	**0.0200**	**3.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**2.8086**	**2.8086**	**1.9000e-004**	**0.0000**	**2.8134**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	2.0800e-003	1.0000e-005	6.0000e-004	0.0000	6.1000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.5439	0.5439	2.0000e-005	0.0000	0.5443
Total	**2.4000e-004**	**1.8000e-004**	**2.0800e-003**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**6.1000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.5439**	**0.5439**	**2.0000e-005**	**0.0000**	**0.5443**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4100e-003	0.0168	0.0200	3.0000e-005		1.0400e-003	1.0400e-003		1.0400e-003	1.0400e-003	0.0000	2.8086	2.8086	1.9000e-004	0.0000	2.8134
Total	**0.0947**	**0.0168**	**0.0200**	**3.0000e-005**		**1.0400e-003**	**1.0400e-003**		**1.0400e-003**	**1.0400e-003**	**0.0000**	**2.8086**	**2.8086**	**1.9000e-004**	**0.0000**	**2.8134**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.8000e-004	2.0800e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5439	0.5439	2.0000e-005	0.0000	0.5443
Total	**2.4000e-004**	**1.8000e-004**	**2.0800e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.5439**	**0.5439**	**2.0000e-005**	**0.0000**	**0.5443**

3.8 Temporary Portables Removal - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2300e-003	0.0145	5.9100e-003	2.0000e-005		5.9000e-004	5.9000e-004		5.4000e-004	5.4000e-004	0.0000	1.5107	1.5107	4.9000e-004	0.0000	1.5229
Total	**1.2300e-003**	**0.0145**	**5.9100e-003**	**2.0000e-005**	**0.0000**	**5.9000e-004**	**5.9000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**1.5107**	**1.5107**	**4.9000e-004**	**0.0000**	**1.5229**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.0700e-003	5.6000e-004	1.0000e-005	1.3000e-004	0.0000	1.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5176	0.5176	3.0000e-005	0.0000	0.5184
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0890	0.0890	0.0000	0.0000	0.0891
Total	**1.1000e-004**	**2.1000e-003**	**9.0000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**2.4000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.6066**	**0.6066**	**3.0000e-005**	**0.0000**	**0.6075**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2300e-003	0.0145	5.9100e-003	2.0000e-005		5.9000e-004	5.9000e-004		5.4000e-004	5.4000e-004	0.0000	1.5107	1.5107	4.9000e-004	0.0000	1.5229
Total	**1.2300e-003**	**0.0145**	**5.9100e-003**	**2.0000e-005**	**0.0000**	**5.9000e-004**	**5.9000e-004**	**0.0000**	**5.4000e-004**	**5.4000e-004**	**0.0000**	**1.5107**	**1.5107**	**4.9000e-004**	**0.0000**	**1.5229**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.0700e-003	5.6000e-004	1.0000e-005	1.2000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.5176	0.5176	3.0000e-005	0.0000	0.5184
Worker	4.0000e-005	3.0000e-005	3.4000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0890	0.0890	0.0000	0.0000	0.0891
Total	**1.1000e-004**	**2.1000e-003**	**9.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.6066**	**0.6066**	**3.0000e-005**	**0.0000**	**0.6075**

3.9 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0154	0.1351	0.1413	2.3000e-004		6.9700e-003	6.9700e-003		6.5300e-003	6.5300e-003	0.0000	18.6707	18.6707	5.0700e-003	0.0000	18.7976
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0154**	**0.1351**	**0.1413**	**2.3000e-004**		**6.9700e-003**	**6.9700e-003**		**6.5300e-003**	**6.5300e-003**	**0.0000**	**18.6707**	**18.6707**	**5.0700e-003**	**0.0000**	**18.7976**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0213	5.7800e-003	5.0000e-005	1.3600e-003	4.0000e-005	1.4000e-003	3.9000e-004	4.0000e-005	4.3000e-004	0.0000	5.3243	5.3243	3.3000e-004	0.0000	5.3325
Worker	1.5500e-003	1.2100e-003	0.0136	4.0000e-005	3.9400e-003	3.0000e-005	3.9800e-003	1.0500e-003	3.0000e-005	1.0800e-003	0.0000	3.5601	3.5601	1.0000e-004	0.0000	3.5627
Total	**2.2200e-003**	**0.0225**	**0.0194**	**9.0000e-005**	**5.3000e-003**	**7.0000e-005**	**5.3800e-003**	**1.4400e-003**	**7.0000e-005**	**1.5100e-003**	**0.0000**	**8.8844**	**8.8844**	**4.3000e-004**	**0.0000**	**8.8952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0154	0.1351	0.1413	2.3000e-004		6.9700e-003	6.9700e-003		6.5300e-003	6.5300e-003	0.0000	18.6707	18.6707	5.0700e-003	0.0000	18.7975
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0154**	**0.1351**	**0.1413**	**2.3000e-004**		**6.9700e-003**	**6.9700e-003**		**6.5300e-003**	**6.5300e-003**	**0.0000**	**18.6707**	**18.6707**	**5.0700e-003**	**0.0000**	**18.7975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.7000e-004	0.0213	5.7800e-003	5.0000e-005	1.2700e-003	4.0000e-005	1.3200e-003	3.7000e-004	4.0000e-005	4.1000e-004	0.0000	5.3243	5.3243	3.3000e-004	0.0000	5.3325
Worker	1.5500e-003	1.2100e-003	0.0136	4.0000e-005	3.6400e-003	3.0000e-005	3.6700e-003	9.7000e-004	3.0000e-005	1.0000e-003	0.0000	3.5601	3.5601	1.0000e-004	0.0000	3.5627
Total	**2.2200e-003**	**0.0225**	**0.0194**	**9.0000e-005**	**4.9100e-003**	**7.0000e-005**	**4.9900e-003**	**1.3400e-003**	**7.0000e-005**	**1.4100e-003**	**0.0000**	**8.8844**	**8.8844**	**4.3000e-004**	**0.0000**	**8.8952**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0117	0.1012	0.1169	1.9000e-004		4.9400e-003	4.9400e-003		4.6400e-003	4.6400e-003	0.0000	15.5670	15.5670	4.2300e-003	0.0000	15.6728
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.1012**	**0.1169**	**1.9000e-004**		**4.9400e-003**	**4.9400e-003**		**4.6400e-003**	**4.6400e-003**	**0.0000**	**15.5670**	**15.5670**	**4.2300e-003**	**0.0000**	**15.6728**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-004	0.0169	4.5600e-003	5.0000e-005	1.1300e-003	3.0000e-005	1.1700e-003	3.3000e-004	3.0000e-005	3.6000e-004	0.0000	4.3980	4.3980	2.6000e-004	0.0000	4.4045
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.2900e-003	3.0000e-005	3.3100e-003	8.7000e-004	2.0000e-005	9.0000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.7300e-003**	**0.0178**	**0.0150**	**8.0000e-005**	**4.4200e-003**	**6.0000e-005**	**4.4800e-003**	**1.2000e-003**	**5.0000e-005**	**1.2600e-003**	**0.0000**	**7.2604**	**7.2604**	**3.4000e-004**	**0.0000**	**7.2690**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0117	0.1012	0.1169	1.9000e-004		4.9400e-003	4.9400e-003		4.6400e-003	4.6400e-003	0.0000	15.5670	15.5670	4.2300e-003	0.0000	15.6727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0117**	**0.1012**	**0.1169**	**1.9000e-004**		**4.9400e-003**	**4.9400e-003**		**4.6400e-003**	**4.6400e-003**	**0.0000**	**15.5670**	**15.5670**	**4.2300e-003**	**0.0000**	**15.6727**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-004	0.0169	4.5600e-003	5.0000e-005	1.0600e-003	3.0000e-005	1.0900e-003	3.1000e-004	3.0000e-005	3.4000e-004	0.0000	4.3980	4.3980	2.6000e-004	0.0000	4.4045
Worker	1.2100e-003	9.1000e-004	0.0105	3.0000e-005	3.0300e-003	3.0000e-005	3.0600e-003	8.1000e-004	2.0000e-005	8.3000e-004	0.0000	2.8625	2.8625	8.0000e-005	0.0000	2.8644
Total	**1.7300e-003**	**0.0178**	**0.0150**	**8.0000e-005**	**4.0900e-003**	**6.0000e-005**	**4.1500e-003**	**1.1200e-003**	**5.0000e-005**	**1.1700e-003**	**0.0000**	**7.2604**	**7.2604**	**3.4000e-004**	**0.0000**	**7.2690**

Phase 2 Construction

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	44.16	1000sqft	21.04	44,160.00	0
Elementary School	19.90	1000sqft	0.46	19,903.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips.

Off-road Equipment - Assumes use of one crane.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District.

Architectural Coating - Based on building size of of HS and ES buildings.

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips.

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	22,080.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	9,952.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	66,240.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	29,855.00
tblAreaCoating	Area_Nonresidential_Exterior	32032	32182
tblAreaCoating	Area_Nonresidential_Interior	96095	96545
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	20.00	22.00

tblConstructionPhase	PhaseEndDate	5/26/2022	3/20/2021
tblConstructionPhase	PhaseEndDate	11/23/2021	3/20/2021
tblConstructionPhase	PhaseEndDate	8/17/2020	5/21/2021
tblConstructionPhase	PhaseEndDate	3/25/2022	1/29/2022
tblConstructionPhase	PhaseEndDate	11/25/2020	9/18/2020
tblConstructionPhase	PhaseEndDate	8/25/2020	11/29/2021
tblConstructionPhase	PhaseStartDate	3/26/2022	2/18/2021
tblConstructionPhase	PhaseStartDate	11/26/2020	9/21/2020
tblConstructionPhase	PhaseStartDate	7/20/2020	3/22/2021
tblConstructionPhase	PhaseStartDate	1/26/2022	11/30/2021
tblConstructionPhase	PhaseStartDate	9/25/2020	7/20/2020
tblConstructionPhase	PhaseStartDate	8/18/2020	11/22/2021
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	BuildingSpaceSquareFeet	19,900.00	19,903.00
tblLandUse	LandUseSquareFeet	19,900.00	19,903.00
tblLandUse	LotAcreage	1.01	21.04
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors

tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2022
tblSolidWaste	SolidWasteGenerationRate	57.41	57.80
tblTripsAndVMT	HaulingTripNumber	59.00	94.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblWater	IndoorWaterUseRate	1,466,316.90	1,476,278.29
tblWater	OutdoorWaterUseRate	3,770,529.18	3,796,144.19

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.9227	29.9812	27.4571	0.0579	0.8395	1.3191	1.8160	0.2252	1.2481	1.3669	0.0000	5,555.0381	5,555.0381	1.2393	0.0000	5,586.0197
2021	21.5318	28.8595	29.0992	0.0613	0.5554	1.2377	1.7298	0.1336	1.1764	1.3099	0.0000	5,881.6635	5,881.6635	1.2521	0.0000	5,912.9668
2022	1.3445	11.8633	13.2348	0.0271	0.4506	0.4997	0.9502	0.1221	0.4690	0.5911	0.0000	2,536.0585	2,536.0585	0.5035	0.0000	2,548.6454
Maximum	**21.5318**	**29.9812**	**29.0992**	**0.0613**	**0.8395**	**1.3191**	**1.8160**	**0.2252**	**1.2481**	**1.3669**	**0.0000**	**5,881.6635**	**5,881.6635**	**1.2521**	**0.0000**	**5,912.9668**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.9227	29.9812	27.4571	0.0579	0.7667	1.3191	1.7432	0.2087	1.2481	1.3589	0.0000	5,555.0381	5,555.0381	1.2393	0.0000	5,586.0197
2021	21.5318	28.8595	29.0992	0.0613	0.4555	1.2377	1.6932	0.1246	1.1764	1.3009	0.0000	5,881.6635	5,881.6635	1.2521	0.0000	5,912.9668
2022	1.3445	11.8633	13.2348	0.0271	0.4169	0.4997	0.9166	0.1139	0.4690	0.5828	0.0000	2,536.0585	2,536.0585	0.5035	0.0000	2,548.6454
Maximum	**21.5318**	**29.9812**	**29.0992**	**0.0613**	**0.7667**	**1.3191**	**1.7432**	**0.2087**	**1.2481**	**1.3589**	**0.0000**	**5,881.6635**	**5,881.6635**	**1.2521**	**0.0000**	**5,912.9668**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio- CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**11.18**	**0.00**	**3.18**	**7.00**	**0.00**	**0.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/20/2020	9/18/2020	5	45	
2	Building Construction HS	Building Construction	9/21/2020	3/20/2021	5	130	
3	Architectural Coating HS	Architectural Coating	2/18/2021	3/20/2021	5	22	
4	Demolition	Demolition	3/22/2021	5/21/2021	5	45	
5	Building Construction ES	Building Construction	5/24/2021	11/20/2021	5	130	
6	Architectural Coating ES	Architectural Coating	10/21/2021	11/19/2021	5	22	
7	Temporary Portables Removal	Demolition	11/22/2021	11/29/2021	5	6	
8	Paving	Paving	11/30/2021	1/29/2022	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,240; Non-Residential Outdoor: 22,080; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating HS	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction HS	Cranes	1	8.00	231	0.29
Building Construction HS	Forklifts	0	8.00	89	0.20
Building Construction HS	Generator Sets	0	8.00	84	0.74

Paving	Pavers		1	8.00	130	0.42
Paving	Rollers		1	8.00	80	0.38
Demolition	Rubber Tired Dozers		0	8.00	247	0.40
Architectural Coating ES	Air Compressors		1	6.00	78	0.48
Building Construction HS	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Building Construction ES	Cranes		1	8.00	231	0.29
Temporary Portables Removal	Excavators		0	8.00	158	0.38
Paving	Paving Equipment		0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers		0	8.00	247	0.40
Building Construction ES	Forklifts		0	8.00	89	0.20
Building Construction HS	Welders		0	8.00	46	0.45
Building Construction ES	Generator Sets		0	8.00	84	0.74
Building Construction ES	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Temporary Portables Removal	Rubber Tired Dozers		0	8.00	247	0.40
Building Construction ES	Welders		0	8.00	46	0.45
Site Preparation	Excavators		1	8.00	158	0.38
Site Preparation	Plate Compactors		1	8.00	8	0.43
Site Preparation	Rollers		2	8.00	80	0.38
Site Preparation	Trenchers		1	8.00	78	0.50
Building Construction HS	Cement and Mortar Mixers		5	8.00	9	0.56
Building Construction HS	Bore/Drill Rigs		1	8.00	221	0.50
Building Construction HS	Pumps		1	8.00	84	0.74
Building Construction HS	Rough Terrain Forklifts		4	8.00	100	0.40
Building Construction HS	Air Compressors		1	8.00	78	0.48
Demolition	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Demolition	Skid Steer Loaders		1	8.00	65	0.37
Demolition	Crushing/Proc. Equipment		3	8.00	85	0.78

Demolition	Air Compressors	2	8.00	78	0.48
Building Construction ES	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction ES	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction ES	Pumps	1	8.00	84	0.74
Building Construction ES	Rough Terrain Forklifts	4	8.00	100	0.40
Building Construction ES	Air Compressors	1	8.00	78	0.48
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating HS	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction HS	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	8	20.00	2.00	94.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating ES	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction ES	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0271	0.0000	0.0271	4.1000e-003	0.0000	4.1000e-003			0.0000			0.0000
Off-Road	1.5401	14.8331	14.4608	0.0205		0.9425	0.9425		0.8679	0.8679		1,971.0798	1,971.0798	0.6299		1,986.8277
Total	**1.5401**	**14.8331**	**14.4608**	**0.0205**	**0.0271**	**0.9425**	**0.9696**	**4.1000e-003**	**0.8679**	**0.8720**		**1,971.0798**	**1,971.0798**	**0.6299**		**1,986.8277**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2989	9.8403	2.1805	0.0270	0.5984	0.0314	0.6298	0.1640	0.0301	0.1941		2,928.8467	2,928.8467	0.1994		2,933.8306
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0128	1.0000e-003	0.0138	3.6900e-003	9.6000e-004	4.6400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.0828	0.0589	0.7881	2.1300e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		211.7003	211.7003	6.6700e-003		211.8672
Total	**0.3889**	**10.1120**	**3.0244**	**0.0297**	**0.8124**	**0.0341**	**0.8465**	**0.2211**	**0.0326**	**0.2536**		**3,195.9519**	**3,195.9519**	**0.2094**		**3,201.1872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0116	0.0000	0.0116	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	1.5401	14.8331	14.4608	0.0205		0.9425	0.9425		0.8679	0.8679	0.0000	1,971.0798	1,971.0798	0.6299		1,986.8277
Total	**1.5401**	**14.8331**	**14.4608**	**0.0205**	**0.0116**	**0.9425**	**0.9541**	**1.7500e-003**	**0.8679**	**0.8696**	**0.0000**	**1,971.0798**	**1,971.0798**	**0.6299**		**1,986.8277**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2989	9.8403	2.1805	0.0270	0.5576	0.0314	0.5890	0.1540	0.0301	0.1841		2,928.8467	2,928.8467	0.1994		2,933.8306
Vendor	7.1100e-003	0.2127	0.0557	5.2000e-004	0.0120	1.0000e-003	0.0130	3.4800e-003	9.6000e-004	4.4400e-003		55.4049	55.4049	3.3800e-003		55.4895
Worker	0.0828	0.0589	0.7881	2.1300e-003	0.1855	1.6800e-003	0.1871	0.0495	1.5500e-003	0.0510		211.7003	211.7003	6.6700e-003		211.8672
Total	**0.3889**	**10.1120**	**3.0244**	**0.0297**	**0.7551**	**0.0341**	**0.7892**	**0.2070**	**0.0326**	**0.2396**		**3,195.9519**	**3,195.9519**	**0.2094**		**3,201.1872**

3.3 Building Construction HS - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357		4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**		**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0747	2.2338	0.5853	5.4500e-003	0.1344	0.0105	0.1450	0.0387	0.0101	0.0488		581.7519	581.7519	0.0355		582.6394
Worker	0.1243	0.0884	1.1822	3.1900e-003	0.3018	2.5200e-003	0.3043	0.0800	2.3200e-003	0.0824		317.5505	317.5505	0.0100		317.8008
Total	**0.1989**	**2.3222**	**1.7675**	**8.6400e-003**	**0.4362**	**0.0130**	**0.4493**	**0.1188**	**0.0124**	**0.1311**		**899.3023**	**899.3023**	**0.0455**		**900.4401**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357	0.0000	4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**	**0.0000**	**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0747	2.2338	0.5853	5.4500e-003	0.1258	0.0105	0.1363	0.0366	0.0101	0.0467		581.7519	581.7519	0.0355		582.6394
Worker	0.1243	0.0884	1.1822	3.1900e-003	0.2782	2.5200e-003	0.2807	0.0742	2.3200e-003	0.0766		317.5505	317.5505	0.0100		317.8008
Total	**0.1989**	**2.3222**	**1.7675**	**8.6400e-003**	**0.4040**	**0.0130**	**0.4170**	**0.1108**	**0.0124**	**0.1232**		**899.3023**	**899.3023**	**0.0455**		**900.4401**

3.3 Building Construction HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756		4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**		**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0638	2.0389	0.5330	5.4000e-003	0.1344	4.1700e-003	0.1386	0.0387	3.9900e-003	0.0427		577.2493	577.2493	0.0340		578.0995
Worker	0.1157	0.0796	1.0875	3.0900e-003	0.3018	2.4400e-003	0.3042	0.0800	2.2500e-003	0.0823		307.4679	307.4679	9.0600e-003		307.6944
Total	**0.1796**	**2.1184**	**1.6205**	**8.4900e-003**	**0.4362**	**6.6100e-003**	**0.4428**	**0.1188**	**6.2400e-003**	**0.1250**		**884.7172**	**884.7172**	**0.0431**		**885.7939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756	0.0000	4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**	**0.0000**	**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0638	2.0389	0.5330	5.4000e-003	0.1258	4.1700e-003	0.1300	0.0366	3.9900e-003	0.0406		577.2493	577.2493	0.0340		578.0995
Worker	0.1157	0.0796	1.0875	3.0900e-003	0.2782	2.4400e-003	0.2806	0.0742	2.2500e-003	0.0765		307.4679	307.4679	9.0600e-003		307.6944
Total	**0.1796**	**2.1184**	**1.6205**	**8.4900e-003**	**0.4040**	**6.6100e-003**	**0.4106**	**0.1108**	**6.2400e-003**	**0.1171**		**884.7172**	**884.7172**	**0.0431**		**885.7939**

3.4 Architectural Coating HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.6074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**18.8263**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0214**	**0.0147**	**0.2014**	**5.7000e-004**	**0.0559**	**4.5000e-004**	**0.0563**	**0.0148**	**4.2000e-004**	**0.0152**		**56.9385**	**56.9385**	**1.6800e-003**		**56.9804**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.6074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**18.8263**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0214**	**0.0147**	**0.2014**	**5.7000e-004**	**0.0515**	**4.5000e-004**	**0.0520**	**0.0138**	**4.2000e-004**	**0.0142**		**56.9385**	**56.9385**	**1.6800e-003**		**56.9804**

3.5 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2825	0.0000	0.2825	0.0428	0.0000	0.0428			0.0000			0.0000
Off-Road	2.6111	19.5980	24.7722	0.0393		1.1318	1.1318		1.1113	1.1113		3,743.3774	3,743.3774	0.5115		3,756.1649
Total	**2.6111**	**19.5980**	**24.7722**	**0.0393**	**0.2825**	**1.1318**	**1.4143**	**0.0428**	**1.1113**	**1.1540**		**3,743.3774**	**3,743.3774**	**0.5115**		**3,756.1649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0174	0.5603	0.1314	1.6300e-003	0.0365	1.7200e-003	0.0382	0.0100	1.6500e-003	0.0117		176.8132	176.8132	0.0120		177.1132
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0128	4.0000e-004	0.0132	3.6900e-003	3.8000e-004	4.0700e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1092**	**0.8134**	**0.9877**	**4.4300e-003**	**0.2729**	**3.9300e-003**	**0.2768**	**0.0730**	**3.6900e-003**	**0.0767**		**459.5433**	**459.5433**	**0.0220**		**460.0920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1208	0.0000	0.1208	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	2.6111	19.5980	24.7722	0.0393		1.1318	1.1318		1.1113	1.1113	0.0000	3,743.3774	3,743.3774	0.5115		3,756.1649
Total	**2.6111**	**19.5980**	**24.7722**	**0.0393**	**0.1208**	**1.1318**	**1.2525**	**0.0183**	**1.1113**	**1.1295**	**0.0000**	**3,743.3774**	**3,743.3774**	**0.5115**		**3,756.1649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0174	0.5603	0.1314	1.6300e-003	0.0340	1.7200e-003	0.0358	9.4000e-003	1.6500e-003	0.0111		176.8132	176.8132	0.0120		177.1132
Vendor	6.0800e-003	0.1942	0.0508	5.1000e-004	0.0120	4.0000e-004	0.0124	3.4900e-003	3.8000e-004	3.8600e-003		54.9761	54.9761	3.2400e-003		55.0571
Worker	0.0857	0.0589	0.8056	2.2900e-003	0.2061	1.8100e-003	0.2079	0.0550	1.6600e-003	0.0567		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.1092**	**0.8134**	**0.9877**	**4.4300e-003**	**0.2521**	**3.9300e-003**	**0.2560**	**0.0679**	**3.6900e-003**	**0.0716**		**459.5433**	**459.5433**	**0.0220**		**460.0920**

3.6 Building Construction ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756		4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**		**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0638	2.0389	0.5330	5.4000e-003	0.1344	4.1700e-003	0.1386	0.0387	3.9900e-003	0.0427		577.2493	577.2493	0.0340		578.0995
Worker	0.1157	0.0796	1.0875	3.0900e-003	0.3018	2.4400e-003	0.3042	0.0800	2.2500e-003	0.0823		307.4679	307.4679	9.0600e-003		307.6944
Total	**0.1796**	**2.1184**	**1.6205**	**8.4900e-003**	**0.4362**	**6.6100e-003**	**0.4428**	**0.1188**	**6.2400e-003**	**0.1250**		**884.7172**	**884.7172**	**0.0431**		**885.7939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756	0.0000	4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**	**0.0000**	**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0638	2.0389	0.5330	5.4000e-003	0.1258	4.1700e-003	0.1300	0.0366	3.9900e-003	0.0406		577.2493	577.2493	0.0340		578.0995
Worker	0.1157	0.0796	1.0875	3.0900e-003	0.2782	2.4400e-003	0.2806	0.0742	2.2500e-003	0.0765		307.4679	307.4679	9.0600e-003		307.6944
Total	**0.1796**	**2.1184**	**1.6205**	**8.4900e-003**	**0.4040**	**6.6100e-003**	**0.4106**	**0.1108**	**6.2400e-003**	**0.1171**		**884.7172**	**884.7172**	**0.0431**		**885.7939**

3.7 Architectural Coating ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.3866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**8.6055**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0214**	**0.0147**	**0.2014**	**5.7000e-004**	**0.0559**	**4.5000e-004**	**0.0563**	**0.0148**	**4.2000e-004**	**0.0152**		**56.9385**	**56.9385**	**1.6800e-003**		**56.9804**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.3866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**8.6055**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0214	0.0147	0.2014	5.7000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		56.9385	56.9385	1.6800e-003		56.9804
Total	**0.0214**	**0.0147**	**0.2014**	**5.7000e-004**	**0.0515**	**4.5000e-004**	**0.0520**	**0.0138**	**4.2000e-004**	**0.0142**		**56.9385**	**56.9385**	**1.6800e-003**		**56.9804**

3.8 Temporary Portables Removal - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4102	4.8176	1.9699	5.7300e-003		0.1956	0.1956		0.1800	0.1800		555.0781	555.0781	0.1795		559.5662
Total	**0.4102**	**4.8176**	**1.9699**	**5.7300e-003**	**0.0000**	**0.1956**	**0.1956**	**0.0000**	**0.1800**	**0.1800**		**555.0781**	**555.0781**	**0.1795**		**559.5662**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6796	0.1777	1.8000e-003	0.0448	1.3900e-003	0.0462	0.0129	1.3300e-003	0.0142		192.4164	192.4164	0.0113		192.6998
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0341**	**0.6885**	**0.2985**	**2.1400e-003**	**0.0783**	**1.6600e-003**	**0.0800**	**0.0218**	**1.5800e-003**	**0.0234**		**226.5795**	**226.5795**	**0.0124**		**226.8881**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4102	4.8176	1.9699	5.7300e-003		0.1956	0.1956		0.1800	0.1800	0.0000	555.0781	555.0781	0.1795		559.5662
Total	**0.4102**	**4.8176**	**1.9699**	**5.7300e-003**	**0.0000**	**0.1956**	**0.1956**	**0.0000**	**0.1800**	**0.1800**	**0.0000**	**555.0781**	**555.0781**	**0.1795**		**559.5662**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0213	0.6796	0.1777	1.8000e-003	0.0419	1.3900e-003	0.0433	0.0122	1.3300e-003	0.0135		192.4164	192.4164	0.0113		192.6998
Worker	0.0129	8.8400e-003	0.1208	3.4000e-004	0.0309	2.7000e-004	0.0312	8.2500e-003	2.5000e-004	8.5000e-003		34.1631	34.1631	1.0100e-003		34.1883
Total	**0.0341**	**0.6885**	**0.2985**	**2.1400e-003**	**0.0729**	**1.6600e-003**	**0.0745**	**0.0205**	**1.5800e-003**	**0.0220**		**226.5795**	**226.5795**	**0.0124**		**226.8881**

3.9 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2803	11.2564	11.7726	0.0192		0.5811	0.5811		0.5438	0.5438		1,715.0804	1,715.0804	0.4659		1,726.7290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2803**	**11.2564**	**11.7726**	**0.0192**		**0.5811**	**0.5811**		**0.5438**	**0.5438**		**1,715.0804**	**1,715.0804**	**0.4659**		**1,726.7290**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0547	1.7476	0.4569	4.6300e-003	0.1152	3.5700e-003	0.1188	0.0332	3.4200e-003	0.0366		494.7851	494.7851	0.0292		495.5139
Worker	0.1286	0.0884	1.2083	3.4300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914		341.6310	341.6310	0.0101		341.8826
Total	**0.1833**	**1.8360**	**1.6652**	**8.0600e-003**	**0.4506**	**6.2800e-003**	**0.4569**	**0.1221**	**5.9200e-003**	**0.1280**		**836.4161**	**836.4161**	**0.0392**		**837.3965**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2803	11.2564	11.7726	0.0192		0.5811	0.5811		0.5438	0.5438	0.0000	1,715.0804	1,715.0804	0.4659		1,726.7290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2803**	**11.2564**	**11.7726**	**0.0192**		**0.5811**	**0.5811**		**0.5438**	**0.5438**	**0.0000**	**1,715.0804**	**1,715.0804**	**0.4659**		**1,726.7290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0547	1.7476	0.4569	4.6300e-003	0.1079	3.5700e-003	0.1114	0.0314	3.4200e-003	0.0348		494.7851	494.7851	0.0292		495.5139
Worker	0.1286	0.0884	1.2083	3.4300e-003	0.3091	2.7100e-003	0.3118	0.0825	2.5000e-003	0.0850		341.6310	341.6310	0.0101		341.8826
Total	**0.1833**	**1.8360**	**1.6652**	**8.0600e-003**	**0.4169**	**6.2800e-003**	**0.4232**	**0.1139**	**5.9200e-003**	**0.1198**		**836.4161**	**836.4161**	**0.0392**		**837.3965**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1727	10.1215	11.6877	0.0192		0.4939	0.4939		0.4636	0.4636		1,715.9702	1,715.9702	0.4662		1,727.6260
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1727**	**10.1215**	**11.6877**	**0.0192**		**0.4939**	**0.4939**		**0.4636**	**0.4636**		**1,715.9702**	**1,715.9702**	**0.4662**		**1,727.6260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0514	1.6619	0.4323	4.5800e-003	0.1152	3.1200e-003	0.1184	0.0332	2.9900e-003	0.0362		490.4746	490.4746	0.0282		491.1783
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1718**	**1.7418**	**1.5471**	**7.8900e-003**	**0.4506**	**5.7400e-003**	**0.4563**	**0.1221**	**5.4100e-003**	**0.1275**		**820.0883**	**820.0883**	**0.0373**		**821.0194**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1727	10.1215	11.6877	0.0192		0.4939	0.4939		0.4636	0.4636	0.0000	1,715.9702	1,715.9702	0.4662		1,727.6260
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1727**	**10.1215**	**11.6877**	**0.0192**		**0.4939**	**0.4939**		**0.4636**	**0.4636**	**0.0000**	**1,715.9702**	**1,715.9702**	**0.4662**		**1,727.6260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0514	1.6619	0.4323	4.5800e-003	0.1079	3.1200e-003	0.1110	0.0314	2.9900e-003	0.0344		490.4746	490.4746	0.0282		491.1783
Worker	0.1205	0.0798	1.1148	3.3100e-003	0.3091	2.6200e-003	0.3117	0.0825	2.4200e-003	0.0849		329.6137	329.6137	9.1000e-003		329.8411
Total	**0.1718**	**1.7418**	**1.5471**	**7.8900e-003**	**0.4169**	**5.7400e-003**	**0.4227**	**0.1139**	**5.4100e-003**	**0.1193**		**820.0883**	**820.0883**	**0.0373**		**821.0194**

Phase 2 Construction

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	44.16	1000sqft	21.04	44,160.00	0
Elementary School	19.90	1000sqft	0.46	19,903.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - .

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips.

Off-road Equipment - Assumes use of one crane.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District.

Architectural Coating - Based on building size of of HS and ES buildings.

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips.

Off-road Equipment -

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips.

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	22,080.00
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	32,032.00	9,952.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	66,240.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	96,095.00	29,855.00
tblAreaCoating	Area_Nonresidential_Exterior	32032	32182
tblAreaCoating	Area_Nonresidential_Interior	96095	96545
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	370.00	130.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	10.00	45.00
tblConstructionPhase	NumDays	20.00	6.00
tblConstructionPhase	NumDays	20.00	22.00

tblConstructionPhase	PhaseEndDate	5/26/2022	3/20/2021
tblConstructionPhase	PhaseEndDate	11/23/2021	3/20/2021
tblConstructionPhase	PhaseEndDate	8/17/2020	5/21/2021
tblConstructionPhase	PhaseEndDate	3/25/2022	1/29/2022
tblConstructionPhase	PhaseEndDate	11/25/2020	9/18/2020
tblConstructionPhase	PhaseEndDate	8/25/2020	11/29/2021
tblConstructionPhase	PhaseStartDate	3/26/2022	2/18/2021
tblConstructionPhase	PhaseStartDate	11/26/2020	9/21/2020
tblConstructionPhase	PhaseStartDate	7/20/2020	3/22/2021
tblConstructionPhase	PhaseStartDate	1/26/2022	11/30/2021
tblConstructionPhase	PhaseStartDate	9/25/2020	7/20/2020
tblConstructionPhase	PhaseStartDate	8/18/2020	11/22/2021
tblGrading	MaterialExported	0.00	10,780.00
tblLandUse	BuildingSpaceSquareFeet	19,900.00	19,903.00
tblLandUse	LandUseSquareFeet	19,900.00	19,903.00
tblLandUse	LotAcreage	1.01	21.04
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.37	0.37
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Trenchers
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors

tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Pumps
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Air Compressors
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentType		Cement and Mortar Mixers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2022
tblSolidWaste	SolidWasteGenerationRate	57.41	57.80
tblTripsAndVMT	HaulingTripNumber	59.00	94.00
tblTripsAndVMT	HaulingTripNumber	1,348.00	1,540.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	10.00	21.00
tblWater	IndoorWaterUseRate	1,466,316.90	1,476,278.29
tblWater	OutdoorWaterUseRate	3,770,529.18	3,796,144.19

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.9398	29.9902	27.4179	0.0576	0.8395	1.3193	1.8165	0.2252	1.2483	1.3670	0.0000	5,520.5823	5,520.5823	1.2410	0.0000	5,551.6077
2021	21.5504	28.8653	29.0453	0.0610	0.5554	1.2379	1.7300	0.1336	1.1765	1.3100	0.0000	5,844.5537	5,844.5537	1.2537	0.0000	5,875.8969
2022	1.3609	11.8673	13.1837	0.0268	0.4506	0.4998	0.9503	0.1221	0.4691	0.5912	0.0000	2,503.2875	2,503.2875	0.5048	0.0000	2,515.9063
Maximum	**21.5504**	**29.9902**	**29.0453**	**0.0610**	**0.8395**	**1.3193**	**1.8165**	**0.2252**	**1.2483**	**1.3670**	**0.0000**	**5,844.5537**	**5,844.5537**	**1.2537**	**0.0000**	**5,875.8969**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	2.9398	29.9902	27.4179	0.0576	0.7667	1.3193	1.7437	0.2087	1.2483	1.3591	0.0000	5,520.5823	5,520.5823	1.2410	0.0000	5,551.6076
2021	21.5504	28.8653	29.0453	0.0610	0.4555	1.2379	1.6934	0.1246	1.1765	1.3011	0.0000	5,844.553	5,844.5537	1.2537	0.0000	5,875.896
2022	1.3609	11.8673	13.1837	0.0268	0.4169	0.4998	0.9167	0.1139	0.4691	0.5829	0.0000	2,503.287	2,503.2875	0.5048	0.0000	2,515.906
Maximum	**21.5504**	**29.9902**	**29.0453**	**0.0610**	**0.7667**	**1.3193**	**1.7437**	**0.2087**	**1.2483**	**1.3591**	**0.0000**	**5,844.5537**	**5,844.5537**	**1.2537**	**0.0000**	**5,875.8969**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**11.18**	**0.00**	**3.18**	**7.00**	**0.00**	**0.77**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	7/20/2020	9/18/2020	5	45	
2	Building Construction HS	Building Construction	9/21/2020	3/20/2021	5	130	
3	Architectural Coating HS	Architectural Coating	2/18/2021	3/20/2021	5	22	
4	Demolition	Demolition	3/22/2021	5/21/2021	5	45	
5	Building Construction ES	Building Construction	5/24/2021	11/20/2021	5	130	
6	Architectural Coating ES	Architectural Coating	10/21/2021	11/19/2021	5	22	
7	Temporary Portables Removal	Demolition	11/22/2021	11/29/2021	5	6	
8	Paving	Paving	11/30/2021	1/29/2022	5	44	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 66,240; Non-Residential Outdoor: 22,080; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating HS	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	1	8.00	158	0.38
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Temporary Portables Removal	Concrete/Industrial Saws	0	8.00	81	0.73
Building Construction HS	Cranes	1	8.00	231	0.29
Building Construction HS	Forklifts	0	8.00	89	0.20
Building Construction HS	Generator Sets	0	8.00	84	0.74

Paving	Pavers		1	8.00	130	0.42
Paving	Rollers		1	8.00	80	0.38
Demolition	Rubber Tired Dozers		0	8.00	247	0.40
Architectural Coating ES	Air Compressors		1	6.00	78	0.48
Building Construction HS	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Building Construction ES	Cranes		1	8.00	231	0.29
Temporary Portables Removal	Excavators		0	8.00	158	0.38
Paving	Paving Equipment		0	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Site Preparation	Rubber Tired Dozers		0	8.00	247	0.40
Building Construction ES	Forklifts		0	8.00	89	0.20
Building Construction HS	Welders		0	8.00	46	0.45
Building Construction ES	Generator Sets		0	8.00	84	0.74
Building Construction ES	Tractors/Loaders/Backhoes		2	8.00	97	0.37
Temporary Portables Removal	Rubber Tired Dozers		0	8.00	247	0.40
Building Construction ES	Welders		0	8.00	46	0.45
Site Preparation	Excavators		1	8.00	158	0.38
Site Preparation	Plate Compactors		1	8.00	8	0.43
Site Preparation	Rollers		2	8.00	80	0.38
Site Preparation	Trenchers		1	8.00	78	0.50
Building Construction HS	Cement and Mortar Mixers		5	8.00	9	0.56
Building Construction HS	Bore/Drill Rigs		1	8.00	221	0.50
Building Construction HS	Pumps		1	8.00	84	0.74
Building Construction HS	Rough Terrain Forklifts		4	8.00	100	0.40
Building Construction HS	Air Compressors		1	8.00	78	0.48
Demolition	Tractors/Loaders/Backhoes		1	8.00	97	0.37
Demolition	Skid Steer Loaders		1	8.00	65	0.37
Demolition	Crushing/Proc. Equipment		3	8.00	85	0.78

Demolition	Air Compressors	2	8.00	78	0.48
Building Construction ES	Cement and Mortar Mixers	5	8.00	9	0.56
Building Construction ES	Bore/Drill Rigs	1	8.00	221	0.50
Building Construction ES	Pumps	1	8.00	84	0.74
Building Construction ES	Rough Terrain Forklifts	4	8.00	100	0.40
Building Construction ES	Air Compressors	1	8.00	78	0.48
Temporary Portables Removal	Cranes	1	8.00	231	0.29
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	8	8.00	9	0.56

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating HS	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction HS	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	8	20.00	2.00	94.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating ES	1	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	12	30.00	18.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	2.00	1,540.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Temporary Portables Removal	1	3.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction ES	15	27.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0271	0.0000	0.0271	4.1000e-003	0.0000	4.1000e-003			0.0000			0.0000
Off-Road	1.5401	14.8331	14.4608	0.0205		0.9425	0.9425		0.8679	0.8679		1,971.0798	1,971.0798	0.6299		1,986.8277
Total	**1.5401**	**14.8331**	**14.4608**	**0.0205**	**0.0271**	**0.9425**	**0.9696**	**4.1000e-003**	**0.8679**	**0.8720**		**1,971.0798**	**1,971.0798**	**0.6299**		**1,986.8277**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3062	9.9677	2.3174	0.0266	0.5984	0.0319	0.6303	0.1640	0.0305	0.1945		2,878.4108	2,878.4108	0.2066		2,883.5759
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0128	1.0200e-003	0.0138	3.6900e-003	9.7000e-004	4.6600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.0920	0.0652	0.7218	2.0000e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		199.3357	199.3357	6.2800e-003		199.4927
Total	**0.4056**	**10.2456**	**3.1007**	**0.0291**	**0.8124**	**0.0346**	**0.8470**	**0.2211**	**0.0330**	**0.2541**		**3,131.6363**	**3,131.6363**	**0.2165**		**3,137.0486**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0116	0.0000	0.0116	1.7500e-003	0.0000	1.7500e-003			0.0000			0.0000
Off-Road	1.5401	14.8331	14.4608	0.0205		0.9425	0.9425		0.8679	0.8679	0.0000	1,971.0798	1,971.0798	0.6299		1,986.8277
Total	**1.5401**	**14.8331**	**14.4608**	**0.0205**	**0.0116**	**0.9425**	**0.9541**	**1.7500e-003**	**0.8679**	**0.8696**	**0.0000**	**1,971.0798**	**1,971.0798**	**0.6299**		**1,986.8277**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3062	9.9677	2.3174	0.0266	0.5576	0.0319	0.5895	0.1540	0.0305	0.1845		2,878.4108	2,878.4108	0.2066		2,883.5759
Vendor	7.4400e-003	0.2127	0.0615	5.0000e-004	0.0120	1.0200e-003	0.0130	3.4800e-003	9.7000e-004	4.4600e-003		53.8898	53.8898	3.6000e-003		53.9799
Worker	0.0920	0.0652	0.7218	2.0000e-003	0.1855	1.6800e-003	0.1871	0.0495	1.5500e-003	0.0510		199.3357	199.3357	6.2800e-003		199.4927
Total	**0.4056**	**10.2456**	**3.1007**	**0.0291**	**0.7551**	**0.0346**	**0.7897**	**0.2070**	**0.0330**	**0.2400**		**3,131.6363**	**3,131.6363**	**0.2165**		**3,137.0486**

3.3 Building Construction HS - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357		4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**		**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1344	0.0107	0.1451	0.0387	0.0102	0.0489		565.8430	565.8430	0.0378		566.7890
Worker	0.1380	0.0979	1.0827	3.0000e-003	0.3018	2.5200e-003	0.3043	0.0800	2.3200e-003	0.0824		299.0035	299.0035	9.4200e-003		299.2391
Total	**0.2161**	**2.3312**	**1.7282**	**8.3000e-003**	**0.4362**	**0.0132**	**0.4494**	**0.1188**	**0.0125**	**0.1313**		**864.8465**	**864.8465**	**0.0473**		**866.0281**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7237	27.6590	25.6897	0.0493		1.3061	1.3061		1.2357	1.2357	0.0000	4,655.7358	4,655.7358	1.1938		4,685.5796
Total	**2.7237**	**27.6590**	**25.6897**	**0.0493**		**1.3061**	**1.3061**		**1.2357**	**1.2357**	**0.0000**	**4,655.7358**	**4,655.7358**	**1.1938**		**4,685.5796**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0781	2.2334	0.6455	5.3000e-003	0.1258	0.0107	0.1365	0.0366	0.0102	0.0468		565.8430	565.8430	0.0378		566.7890
Worker	0.1380	0.0979	1.0827	3.0000e-003	0.2782	2.5200e-003	0.2807	0.0742	2.3200e-003	0.0766		299.0035	299.0035	9.4200e-003		299.2391
Total	**0.2161**	**2.3312**	**1.7282**	**8.3000e-003**	**0.4040**	**0.0132**	**0.4172**	**0.1108**	**0.0125**	**0.1234**		**864.8465**	**864.8465**	**0.0473**		**866.0281**

3.3 Building Construction HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756		4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**		**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0670	2.0347	0.5896	5.2500e-003	0.1344	4.3000e-003	0.1388	0.0387	4.1100e-003	0.0428		561.4256	561.4256	0.0362		562.3317
Worker	0.1287	0.0881	0.9943	2.9100e-003	0.3018	2.4400e-003	0.3042	0.0800	2.2500e-003	0.0823		289.5078	289.5078	8.5200e-003		289.7208
Total	**0.1958**	**2.1227**	**1.5839**	**8.1600e-003**	**0.4362**	**6.7400e-003**	**0.4430**	**0.1188**	**6.3600e-003**	**0.1251**		**850.9334**	**850.9334**	**0.0448**		**852.0525**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756	0.0000	4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**	**0.0000**	**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0670	2.0347	0.5896	5.2500e-003	0.1258	4.3000e-003	0.1301	0.0366	4.1100e-003	0.0407		561.4256	561.4256	0.0362		562.3317
Worker	0.1287	0.0881	0.9943	2.9100e-003	0.2782	2.4400e-003	0.2806	0.0742	2.2500e-003	0.0765		289.5078	289.5078	8.5200e-003		289.7208
Total	**0.1958**	**2.1227**	**1.5839**	**8.1600e-003**	**0.4040**	**6.7400e-003**	**0.4108**	**0.1108**	**6.3600e-003**	**0.1172**		**850.9334**	**850.9334**	**0.0448**		**852.0525**

3.4 Architectural Coating HS - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.6074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**18.8263**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0238**	**0.0163**	**0.1841**	**5.4000e-004**	**0.0559**	**4.5000e-004**	**0.0563**	**0.0148**	**4.2000e-004**	**0.0152**		**53.6126**	**53.6126**	**1.5800e-003**		**53.6520**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.6074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**18.8263**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0238**	**0.0163**	**0.1841**	**5.4000e-004**	**0.0515**	**4.5000e-004**	**0.0520**	**0.0138**	**4.2000e-004**	**0.0142**		**53.6126**	**53.6126**	**1.5800e-003**		**53.6520**

3.5 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2825	0.0000	0.2825	0.0428	0.0000	0.0428			0.0000			0.0000
Off-Road	2.6111	19.5980	24.7722	0.0393		1.1318	1.1318		1.1113	1.1113		3,743.3774	3,743.3774	0.5115		3,756.1649
Total	**2.6111**	**19.5980**	**24.7722**	**0.0393**	**0.2825**	**1.1318**	**1.4143**	**0.0428**	**1.1113**	**1.1540**		**3,743.3774**	**3,743.3774**	**0.5115**		**3,756.1649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.5672	0.1393	1.6000e-003	0.0365	1.7500e-003	0.0383	0.0100	1.6700e-003	0.0117		173.7503	173.7503	0.0124		174.0608
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0128	4.1000e-004	0.0132	3.6900e-003	3.9000e-004	4.0800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1196**	**0.8262**	**0.9320**	**4.2500e-003**	**0.2729**	**3.9700e-003**	**0.2768**	**0.0730**	**3.7200e-003**	**0.0767**		**441.6696**	**441.6696**	**0.0222**		**442.2242**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1208	0.0000	0.1208	0.0183	0.0000	0.0183			0.0000			0.0000
Off-Road	2.6111	19.5980	24.7722	0.0393		1.1318	1.1318		1.1113	1.1113	0.0000	3,743.3774	3,743.3774	0.5115		3,756.1649
Total	**2.6111**	**19.5980**	**24.7722**	**0.0393**	**0.1208**	**1.1318**	**1.2525**	**0.0183**	**1.1113**	**1.1295**	**0.0000**	**3,743.3774**	**3,743.3774**	**0.5115**		**3,756.1649**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.5672	0.1393	1.6000e-003	0.0340	1.7500e-003	0.0358	9.4000e-003	1.6700e-003	0.0111		173.7503	173.7503	0.0124		174.0608
Vendor	6.3800e-003	0.1938	0.0562	5.0000e-004	0.0120	4.1000e-004	0.0124	3.4900e-003	3.9000e-004	3.8800e-003		53.4691	53.4691	3.4500e-003		53.5554
Worker	0.0954	0.0652	0.7365	2.1500e-003	0.2061	1.8100e-003	0.2079	0.0550	1.6600e-003	0.0567		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.1196**	**0.8262**	**0.9320**	**4.2500e-003**	**0.2521**	**3.9700e-003**	**0.2561**	**0.0679**	**3.7200e-003**	**0.0716**		**441.6696**	**441.6696**	**0.0222**		**442.2242**

3.6 Building Construction ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756		4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**		**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0670	2.0347	0.5896	5.2500e-003	0.1344	4.3000e-003	0.1388	0.0387	4.1100e-003	0.0428		561.4256	561.4256	0.0362		562.3317
Worker	0.1287	0.0881	0.9943	2.9100e-003	0.3018	2.4400e-003	0.3042	0.0800	2.2500e-003	0.0823		289.5078	289.5078	8.5200e-003		289.7208
Total	**0.1958**	**2.1227**	**1.5839**	**8.1600e-003**	**0.4362**	**6.7400e-003**	**0.4430**	**0.1188**	**6.3600e-003**	**0.1251**		**850.9334**	**850.9334**	**0.0448**		**852.0525**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5045	25.1995	25.4597	0.0493		1.1366	1.1366		1.0756	1.0756	0.0000	4,658.5597	4,658.5597	1.1881		4,688.2616
Total	**2.5045**	**25.1995**	**25.4597**	**0.0493**		**1.1366**	**1.1366**		**1.0756**	**1.0756**	**0.0000**	**4,658.5597**	**4,658.5597**	**1.1881**		**4,688.2616**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0670	2.0347	0.5896	5.2500e-003	0.1258	4.3000e-003	0.1301	0.0366	4.1100e-003	0.0407		561.4256	561.4256	0.0362		562.3317
Worker	0.1287	0.0881	0.9943	2.9100e-003	0.2782	2.4400e-003	0.2806	0.0742	2.2500e-003	0.0765		289.5078	289.5078	8.5200e-003		289.7208
Total	**0.1958**	**2.1227**	**1.5839**	**8.1600e-003**	**0.4040**	**6.7400e-003**	**0.4108**	**0.1108**	**6.3600e-003**	**0.1172**		**850.9334**	**850.9334**	**0.0448**		**852.0525**

3.7 Architectural Coating ES - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.3866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**8.6055**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0559	4.5000e-004	0.0563	0.0148	4.2000e-004	0.0152		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0238**	**0.0163**	**0.1841**	**5.4000e-004**	**0.0559**	**4.5000e-004**	**0.0563**	**0.0148**	**4.2000e-004**	**0.0152**		**53.6126**	**53.6126**	**1.5800e-003**		**53.6520**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	8.3866					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**8.6055**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0238	0.0163	0.1841	5.4000e-004	0.0515	4.5000e-004	0.0520	0.0138	4.2000e-004	0.0142		53.6126	53.6126	1.5800e-003		53.6520
Total	**0.0238**	**0.0163**	**0.1841**	**5.4000e-004**	**0.0515**	**4.5000e-004**	**0.0520**	**0.0138**	**4.2000e-004**	**0.0142**		**53.6126**	**53.6126**	**1.5800e-003**		**53.6520**

3.8 Temporary Portables Removal - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4102	4.8176	1.9699	5.7300e-003		0.1956	0.1956		0.1800	0.1800		555.0781	555.0781	0.1795		559.5662
Total	**0.4102**	**4.8176**	**1.9699**	**5.7300e-003**	**0.0000**	**0.1956**	**0.1956**	**0.0000**	**0.1800**	**0.1800**		**555.0781**	**555.0781**	**0.1795**		**559.5662**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6782	0.1965	1.7500e-003	0.0448	1.4300e-003	0.0463	0.0129	1.3700e-003	0.0143		187.1419	187.1419	0.0121		187.4439
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0335	2.7000e-004	0.0338	8.8900e-003	2.5000e-004	9.1400e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0366**	**0.6880**	**0.3070**	**2.0700e-003**	**0.0783**	**1.7000e-003**	**0.0801**	**0.0218**	**1.6200e-003**	**0.0234**		**219.3094**	**219.3094**	**0.0130**		**219.6351**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.4102	4.8176	1.9699	5.7300e-003		0.1956	0.1956		0.1800	0.1800	0.0000	555.0781	555.0781	0.1795		559.5662
Total	**0.4102**	**4.8176**	**1.9699**	**5.7300e-003**	**0.0000**	**0.1956**	**0.1956**	**0.0000**	**0.1800**	**0.1800**	**0.0000**	**555.0781**	**555.0781**	**0.1795**		**559.5662**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6782	0.1965	1.7500e-003	0.0419	1.4300e-003	0.0434	0.0122	1.3700e-003	0.0136		187.1419	187.1419	0.0121		187.4439
Worker	0.0143	9.7800e-003	0.1105	3.2000e-004	0.0309	2.7000e-004	0.0312	8.2500e-003	2.5000e-004	8.5000e-003		32.1675	32.1675	9.5000e-004		32.1912
Total	**0.0366**	**0.6880**	**0.3070**	**2.0700e-003**	**0.0729**	**1.7000e-003**	**0.0746**	**0.0205**	**1.6200e-003**	**0.0221**		**219.3094**	**219.3094**	**0.0130**		**219.6351**

3.9 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2803	11.2564	11.7726	0.0192		0.5811	0.5811		0.5438	0.5438		1,715.0804	1,715.0804	0.4659		1,726.7290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2803**	**11.2564**	**11.7726**	**0.0192**		**0.5811**	**0.5811**		**0.5438**	**0.5438**		**1,715.0804**	**1,715.0804**	**0.4659**		**1,726.7290**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0574	1.7440	0.5054	4.5000e-003	0.1152	3.6900e-003	0.1189	0.0332	3.5300e-003	0.0367		481.2220	481.2220	0.0311		481.9986
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3353	2.7100e-003	0.3380	0.0889	2.5000e-003	0.0914		321.6753	321.6753	9.4700e-003		321.9120
Total	**0.2005**	**1.8418**	**1.6102**	**7.7300e-003**	**0.4506**	**6.4000e-003**	**0.4570**	**0.1221**	**6.0300e-003**	**0.1281**		**802.8973**	**802.8973**	**0.0405**		**803.9106**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2803	11.2564	11.7726	0.0192		0.5811	0.5811		0.5438	0.5438	0.0000	1,715.0804	1,715.0804	0.4659		1,726.7290
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2803**	**11.2564**	**11.7726**	**0.0192**		**0.5811**	**0.5811**		**0.5438**	**0.5438**	**0.0000**	**1,715.0804**	**1,715.0804**	**0.4659**		**1,726.7290**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0574	1.7440	0.5054	4.5000e-003	0.1079	3.6900e-003	0.1115	0.0314	3.5300e-003	0.0349		481.2220	481.2220	0.0311		481.9986
Worker	0.1431	0.0978	1.1048	3.2300e-003	0.3091	2.7100e-003	0.3118	0.0825	2.5000e-003	0.0850		321.6753	321.6753	9.4700e-003		321.9120
Total	**0.2005**	**1.8418**	**1.6102**	**7.7300e-003**	**0.4169**	**6.4000e-003**	**0.4233**	**0.1139**	**6.0300e-003**	**0.1199**		**802.8973**	**802.8973**	**0.0405**		**803.9106**

3.9 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1727	10.1215	11.6877	0.0192		0.4939	0.4939		0.4636	0.4636		1,715.9702	1,715.9702	0.4662		1,727.6260
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1727**	**10.1215**	**11.6877**	**0.0192**		**0.4939**	**0.4939**		**0.4636**	**0.4636**		**1,715.9702**	**1,715.9702**	**0.4662**		**1,727.6260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0539	1.6574	0.4784	4.4600e-003	0.1152	3.2300e-003	0.1185	0.0332	3.0900e-003	0.0363		476.9465	476.9465	0.0300		477.6959
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3353	2.6200e-003	0.3380	0.0889	2.4200e-003	0.0914		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1883**	**1.7458**	**1.4959**	**7.5700e-003**	**0.4506**	**5.8500e-003**	**0.4564**	**0.1221**	**5.5100e-003**	**0.1276**		**787.3173**	**787.3173**	**0.0385**		**788.2804**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1727	10.1215	11.6877	0.0192		0.4939	0.4939		0.4636	0.4636	0.0000	1,715.9702	1,715.9702	0.4662		1,727.6260
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1727**	**10.1215**	**11.6877**	**0.0192**		**0.4939**	**0.4939**		**0.4636**	**0.4636**	**0.0000**	**1,715.9702**	**1,715.9702**	**0.4662**		**1,727.6260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0539	1.6574	0.4784	4.4600e-003	0.1079	3.2300e-003	0.1111	0.0314	3.0900e-003	0.0345		476.9465	476.9465	0.0300		477.6959
Worker	0.1344	0.0884	1.0175	3.1100e-003	0.3091	2.6200e-003	0.3117	0.0825	2.4200e-003	0.0849		310.3708	310.3708	8.5500e-003		310.5845
Total	**0.1883**	**1.7458**	**1.4959**	**7.5700e-003**	**0.4169**	**5.8500e-003**	**0.4228**	**0.1139**	**5.5100e-003**	**0.1194**		**787.3173**	**787.3173**	**0.0385**		**788.2804**

Phase 2 Construction

Los Angeles-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating HS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction HS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	6	No Change	0.00
Excavators	Diesel	No Change	0	2	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	0	No Change	0.00
Cranes	Diesel	No Change	0	3	No Change	0.00
Forklifts	Diesel	No Change	0	0	No Change	0.00
Bore/Drill Rigs	Diesel	No Change	0	2	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00

Rollers	Diesel	No Change	0	3	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	0	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	9	No Change	0.00
Generator Sets	Diesel	No Change	0	0	No Change	0.00
Paving Equipment	Diesel	No Change	0	0	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	18	No Change	0.00
Welders	Diesel	No Change	0	0	No Change	0.00
Crushing/Proc. Equipment	Diesel	No Change	0	3	No Change	0.00
Plate Compactors	Diesel	No Change	0	1	No Change	0.00
Pumps	Diesel	No Change	0	2	No Change	0.00
Rough Terrain Forklifts	Diesel	No Change	0	8	No Change	0.00
Skid Steer Loaders	Diesel	No Change	0	1	No Change	0.00
Trenchers	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Unmitigated tons/yr							Unmitigated mt/yr					
Air Compressors	5.70400E-002	3.97600E-001	4.64770E-001	7.60000E-004	2.48600E-002	2.48600E-002	0.00000E+000	6.51931E+001	6.51931E+001	4.58000E-003	0.00000E+000	6.53077E+001
Bore/Drill Rigs	3.42800E-002	4.11440E-001	2.69870E-001	1.22000E-003	1.22800E-002	1.12900E-002	0.00000E+000	1.07487E+002	1.07487E+002	3.47600E-002	0.00000E+000	1.08357E+002
Cement and Mortar Mixers	4.85300E-002	3.04120E-001	2.54730E-001	5.90000E-004	1.18200E-002	1.18200E-002	0.00000E+000	3.78536E+001	3.78536E+001	3.93000E-003	0.00000E+000	3.79519E+001
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	5.64100E-002	6.64930E-001	2.68580E-001	7.70000E-004	2.71200E-002	2.49500E-002	0.00000E+000	6.74067E+001	6.74067E+001	2.18000E-002	0.00000E+000	6.79517E+001
Crushing/Proc. Equipment	3.45700E-002	2.35920E-001	2.92910E-001	4.70000E-004	1.40500E-002	1.40500E-002	0.00000E+000	4.06925E+001	4.06925E+001	2.79000E-003	0.00000E+000	4.07623E+001
Excavators	1.06700E-002	1.02740E-001	1.47140E-001	2.30000E-004	4.98000E-003	4.58000E-003	0.00000E+000	2.04180E+001	2.04180E+001	6.60000E-003	0.00000E+000	2.05831E+001
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.02000E-003	5.21300E-002	6.37000E-002	1.00000E-004	2.50000E-003	2.30000E-003	0.00000E+000	9.08392E+000	9.08392E+000	2.94000E-003	0.00000E+000	9.15737E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	9.00000E-004	5.65000E-003	4.74000E-003	1.00000E-005	2.20000E-004	2.20000E-004	0.00000E+000	7.03780E-001	7.03780E-001	7.00000E-005	0.00000E+000	7.05610E-001

Pumps	5.10400E-002	4.29110E-001	4.87090E-001	8.60000E-004	2.41800E-002	2.41800E-002	0.00000E+000	7.34771E+001	7.34771E+001	4.12000E-003	0.00000E+000	7.35800E+001
Rollers	1.33000E-002	1.34000E-001	1.26370E-001	1.80000E-004	8.38000E-003	7.71000E-003	0.00000E+000	1.54431E+001	1.54431E+001	4.99000E-003	0.00000E+000	1.55680E+001
Rough Terrain Forklifts	6.55900E-002	8.55790E-001	1.19336E+000	1.79000E-003	3.39500E-002	3.12300E-002	0.00000E+000	1.57439E+002	1.57439E+002	5.09200E-002	0.00000E+000	1.58712E+002
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	1.69000E-003	2.24900E-002	3.11500E-002	5.00000E-005	9.20000E-004	8.40000E-004	0.00000E+000	4.06981E+000	4.06981E+000	1.32000E-003	0.00000E+000	4.10272E+000
Tractors/Loaders/Backhoes	7.17500E-002	7.24630E-001	8.41340E-001	1.15000E-003	4.36200E-002	4.01300E-002	0.00000E+000	1.01376E+002	1.01376E+002	3.27900E-002	0.00000E+000	1.02196E+002
Trenchers	9.44000E-003	8.54200E-002	5.93200E-002	8.00000E-005	6.40000E-003	5.88000E-003	0.00000E+000	6.67078E+000	6.67078E+000	2.16000E-003	0.00000E+000	6.72471E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Mitigated tons/yr							Mitigated mt/yr					
Air Compressors	5.70400E-002	3.97600E-001	4.64770E-001	7.60000E-004	2.48600E-002	2.48600E-002	0.00000E+000	6.51930E+001	6.51930E+001	4.58000E-003	0.00000E+000	6.53076E+001
Bore/Drill Rigs	3.42800E-002	4.11440E-001	2.69870E-001	1.22000E-003	1.22800E-002	1.12900E-002	0.00000E+000	1.07487E+002	1.07487E+002	3.47600E-002	0.00000E+000	1.08356E+002
Cement and Mortar Mixers	4.85300E-002	3.04120E-001	2.54730E-001	5.90000E-004	1.18200E-002	1.18200E-002	0.00000E+000	3.78536E+001	3.78536E+001	3.93000E-003	0.00000E+000	3.79518E+001
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	5.64100E-002	6.64930E-001	2.68580E-001	7.70000E-004	2.71200E-002	2.49500E-002	0.00000E+000	6.74066E+001	6.74066E+001	2.18000E-002	0.00000E+000	6.79516E+001
Crushing/Proc. Equipment	3.45700E-002	2.35920E-001	2.92910E-001	4.70000E-004	1.40500E-002	1.40500E-002	0.00000E+000	4.06924E+001	4.06924E+001	2.79000E-003	0.00000E+000	4.07623E+001
Excavators	1.06700E-002	1.02740E-001	1.47140E-001	2.30000E-004	4.98000E-003	4.58000E-003	0.00000E+000	2.04180E+001	2.04180E+001	6.60000E-003	0.00000E+000	2.05831E+001
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	5.02000E-003	5.21300E-002	6.37000E-002	1.00000E-004	2.50000E-003	2.30000E-003	0.00000E+000	9.08391E+000	9.08391E+000	2.94000E-003	0.00000E+000	9.15736E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	9.00000E-004	5.65000E-003	4.74000E-003	1.00000E-005	2.20000E-004	2.20000E-004	0.00000E+000	7.03780E-001	7.03780E-001	7.00000E-005	0.00000E+000	7.05610E-001
Pumps	5.10400E-002	4.29100E-001	4.87090E-001	8.60000E-004	2.41800E-002	2.41800E-002	0.00000E+000	7.34770E+001	7.34770E+001	4.12000E-003	0.00000E+000	7.35799E+001
Rollers	1.33000E-002	1.34000E-001	1.26370E-001	1.80000E-004	8.38000E-003	7.71000E-003	0.00000E+000	1.54431E+001	1.54431E+001	4.99000E-003	0.00000E+000	1.55679E+001
Rough Terrain Forklifts	6.55900E-002	8.55790E-001	1.19336E+000	1.79000E-003	3.39500E-002	3.12300E-002	0.00000E+000	1.57439E+002	1.57439E+002	5.09200E-002	0.00000E+000	1.58712E+002
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	1.69000E-003	2.24900E-002	3.11500E-002	5.00000E-005	9.20000E-004	8.40000E-004	0.00000E+000	4.06981E+000	4.06981E+000	1.32000E-003	0.00000E+000	4.10272E+000
Tractors/Loaders/Backhoes	7.17500E-002	7.24630E-001	8.41340E-001	1.15000E-003	4.36200E-002	4.01300E-002	0.00000E+000	1.01376E+002	1.01376E+002	3.27900E-002	0.00000E+000	1.02196E+002

Trenchers	9.44000E-003	8.54200E-002	5.93200E-002	8.00000E-005	6.40000E-003	5.88000E-003	0.00000E+000	6.67077E+000	6.67077E+000	2.16000E-003	0.00000E+000	6.72470E+000
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22712E-006	1.22712E-006	0.00000E+000	0.00000E+000	1.22497E-006
Bore/Drill Rigs	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.11641E-006	1.11641E-006	0.00000E+000	0.00000E+000	1.10745E-006
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.05670E-006	1.05670E-006	0.00000E+000	0.00000E+000	1.05397E-006
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18683E-006	1.18683E-006	0.00000E+000	0.00000E+000	1.17731E-006
Crushing/Proc. Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22873E-006	1.22873E-006	0.00000E+000	0.00000E+000	1.22662E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	9.79528E-007	9.79528E-007	0.00000E+000	0.00000E+000	9.71672E-007
Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.10085E-006	1.10085E-006	0.00000E+000	0.00000E+000	1.09202E-006
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Plate Compactors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Pumps	0.00000E+000	2.33040E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.22487E-006	1.22487E-006	0.00000E+000	0.00000E+000	1.08725E-006
Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.29508E-006	1.29508E-006	0.00000E+000	0.00000E+000	1.28469E-006
Rough Terrain Forklifts	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.20682E-006	1.20682E-006	0.00000E+000	0.00000E+000	1.19714E-006
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Skid Steer Loaders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18371E-006	1.18371E-006	0.00000E+000	0.00000E+000	1.17422E-006
Trenchers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.49908E-006	1.49908E-006	0.00000E+000	0.00000E+000	1.48705E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	5.00	PM2.5 Reduction	5.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating ES	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating ES	Roads	0.00	0.00	0.00	0.00	0.07	0.06
Architectural Coating HS	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating HS	Roads	0.00	0.00	0.00	0.00	0.07	0.06
Building Construction ES	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction ES	Roads	0.03	0.01	0.03	0.01	0.07	0.07
Building Construction HS	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction HS	Roads	0.03	0.01	0.03	0.01	0.07	0.07
Demolition	Fugitive Dust	0.01	0.00	0.00	0.00	0.57	0.57
Demolition	Roads	0.01	0.00	0.01	0.00	0.07	0.06
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.01	0.00	0.01	0.00	0.07	0.07
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.57	0.56
Site Preparation	Roads	0.02	0.00	0.02	0.00	0.07	0.06
Temporary Portables Removal	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Temporary Portables Removal	Roads	0.00	0.00	0.00	0.00	0.09	0.14

Phase 2 Construction

Los Angeles-South Coast, Summary Report

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	44.16	1000sqft	21.04	44,160.00	0
Elementary School	19.90	1000sqft	0.46	19,903.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	12			**Operational Year**	2022
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments

Only CalEEMod defaults were used.

Project Characteristics - .

Land Use - Based on information provided by the District.

Construction Phase - Based on information provided by the District. Assumes 1 week for temporary portables removal.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for asphalt trucks. Trips for asphalt trucks included as vendor trips

Off-road Equipment - Assumes use of one crane.

Grading -

Demolition -

Trips and VMT - Based on information provided by the District. Utilizes demolition debris haul truck capacity of 10 CY and soil haul truck capacity of 14 CY per District

Architectural Coating - Based on building size of of HS and ES buildings.

Construction Off-road Equipment Mitigation - Per SCAQMD Rules 403 and 1186.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips

Off-road Equipment -

Off-road Equipment - Based on information provided by the District.

Off-road Equipment - Based on information provided by the District. Cement and mortar mixers used as proxy for concrete trucks. Concrete truck trips are represented as vendor trips

Off-road Equipment -

2.0 Peak Daily Emissions

Peak Daily Construction Emissions

Peak Daily Construction Emissions

		Unmitigated						Mitigated					
		ROG	NOX	CO	SO2	PM10	PM2.5	ROG	NOX	CO	SO2	PM10	PM2.5
Year	Phase	lb/day											
2020	Site Preparation	1.9457 W	25.0787 W	17.5614 W	0.0502 S	1.8165 W	1.1261 W	1.9457 W	25.0787 W	17.5614 W	0.0502 S	1.7437 W	1.1096 W
2020	Building Construction	2.9398 W	29.9902 W	27.4571 S	0.0579 S	1.7555 W	1.3670 W	2.9398 W	29.9902 W	27.4571 S	0.0579 S	1.7233 W	1.3591 W
2021	Building Construction	5.4005 W	54.6444 W	54.1605 S	0.1156 S	3.1591 W	2.4014 W	5.4005 W	54.6444 W	54.1605 S	0.1156 S	3.0946 W	2.3856 W
2021	Architectural Coating	27.4795 W	3.0863 W	4.0379 S	7.0800e-003 S	0.3009 S	0.2187 S	27.4795 W	3.0863 W	4.0379 S	7.0800e-003 S	0.2921 S	0.2165 S
2021	Demolition	2.7307 W	20.4242 W	25.7599 S	0.0437 S	1.6911 W	1.2307 W	2.7307 W	20.4242 W	25.7599 S	0.0437 S	1.5086 W	1.2012 W
2021	Paving	1.4808 W	13.0982 W	13.4378 S	0.0273 S	1.0381 W	0.6719 W	1.4808 W	13.0982 W	13.4378 S	0.0273 S	1.0044 W	0.6636 W
2022	Paving	1.3609 W	11.8673 W	13.2348 S	0.0271 S	0.9503 W	0.5912 W	1.3609 W	11.8673 W	13.2348 S	0.0271 S	0.9167 W	0.5829 W
	Peak Daily Total	27.4795 W	54.6444 W	54.1605 S	0.1156 S	3.1591 W	2.4014 W	27.4795 W	54.6444 W	54.1605 S	0.1156 S	3.0946 W	2.3856 W
	Air District Threshold												
	Exceed Significance?												

3.0 Annual GHG Emissions

Annual GHG

Annual GHG

		Unmitigated				Mitigated			
		CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
GHG Activity	Year	MT/yr							
Construction	2020	290.6173	0.0588	0.0000	292.0876	290.6171	0.0588	0.0000	292.0874
Construction	2021	587.9348	0.1213	0.0000	590.9662	587.9342	0.1213	0.0000	590.9656
Construction	2022	22.8275	4.5722e-003	0.0000	22.9418	22.8274	4.5722e-003	0.0000	22.9417
	Total								
	Significance Threshold								
	Exceed Significance?								

Construction Localized Significance Thresholds: Demolition

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
6	0.50	25	82

Source Receptor	**West San Fernando Valley**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**103**	Graders	0.5	0.0625	0	0	0
CO	**426**	Dozers	0.5	0.0625	0	0	0
PM10	**4.00**	Scrapers	1	0.125	0	0	0
PM2.5	**3.00**					**Acres**	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	103	104	121	157	245
	1	103	104	121	157	245
		103	104	121	157	245
CO	1	426	652	1089	2096	6815
	1	426	652	1089	2096	6815
		426	652	1089	2096	6815
PM10	1	4	11	27	59	155
	1	4	11	27	59	155
		4	11	27	59	155
PM2.5	1	3	4	7	18	79
	1	3	4	7	18	79
		3	4	7	18	79

West San Fernando Valley

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	103	104	121	157	245
CO	426	652	1089	2096	6815
PM10	4	11	27	59	155
PM2.5	3	4	7	18	79

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
6	1	6	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Site Preparation

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
6	1.00	25	82

Source Receptor	**West San Fernando Valley**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**103**	Graders	0.5	0.0625			0
CO	**426**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	103	104	121	157	245
	1	103	104	121	157	245
		103	104	121	157	245
CO	1	426	652	1089	2096	6815
	1	426	652	1089	2096	6815
		426	652	1089	2096	6815
PM10	1	4	11	27	59	155
	1	4	11	27	59	155
		4	11	27	59	155
PM2.5	1	3	4	7	18	79
	1	3	4	7	18	79
		3	4	7	18	79

West San Fernando Valley

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	103	104	121	157	245
CO	426	652	1089	2096	6815
PM10	4	11	27	59	155
PM2.5	3	4	7	18	79

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
6	1	6	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
6	1.00	25	82

Source Receptor	**West San Fernando Valley**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	2	1
NOx	**103**	Graders	0.5	0.0625			0
CO	**426**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	1.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	103	104	121	157	245
	1	103	104	121	157	245
		103	104	121	157	245
CO	1	426	652	1089	2096	6815
	1	426	652	1089	2096	6815
		426	652	1089	2096	6815
PM10	1	4	11	27	59	155
	1	4	11	27	59	155
		4	11	27	59	155
PM2.5	1	3	4	7	18	79
	1	3	4	7	18	79
		3	4	7	18	79

West San Fernando Valley

1.00 Acres

	25	**50**	**100**	**200**	**500**
NOx	103	104	121	157	245
CO	426	652	1089	2096	6815
PM10	4	11	27	59	155
PM2.5	3	4	7	18	79

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
6	1	6	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction, Grading, Architectural Coating, and Finish/Landscaping

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)
6	0.50	25	82

Source Receptor	**West San Fernando Valley**	**Equipment**	**Acres/8-hr Day**		**Daily hours**	**Equipment Used**	**Acres**
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**103**	Tractors	0.5	0.0625			0
CO	**426**	Graders	0.5	0.0625			0
PM10	**4.00**	Dozers	0.5	0.0625			0
PM2.5	**3.00**	Scrapers	1	0.125			0
						Acres	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	103	104	121	157	245
	1	103	104	121	157	245
		103	104	121	157	245
CO	1	426	652	1089	2096	6815
	1	426	652	1089	2096	6815
		426	652	1089	2096	6815
PM10	1	4	11	27	59	155
	1	4	11	27	59	155
		4	11	27	59	155
PM2.5	1	3	4	7	18	79
	1	3	4	7	18	79
		3	4	7	18	79

West San Fernando Valley

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	103	104	121	157	245
CO	426	652	1089	2096	6815
PM10	4	11	27	59	155
PM2.5	3	4	7	18	79

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
6	1	6	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Back to:
State Map | Western U.S. map | Home Page

NOTE:
To print data frame (right side), click on right frame before printing.

1981 - 2010

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1981-2010 Normals (~3 KB)

1971 - 2000

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1971-2000 Normals (~3 KB)

1961 - 1990

- Daily Temp. & Precip.
- Daily Tabular data (~23 KB)
- Monthly Tabular data (~1 KB)
- NCDC 1961-1990 Normals (~3 KB)

Period of Record

- Station Metadata
- Station Metadata Graphics

General Climate Summary Tables

- Temperature
- Precipitation
- Heating Degree Days
- Cooling Degree Days
- Growing Degree Days

Temperature

- Daily Extremes and Averages
- Spring 'Freeze' Probabilities
- Fall 'Freeze' Probabilities
- 'Freeze Free' Probabilities
- ○ Monthly Temperature Listings
    - Average

Average Maximum
Average Minimum
Extreme Maximum
Extreme Minimum

Precipitation

- Monthly Average
- Daily Extreme and Average
- Daily Average
- Precipitation Probability by Duration.
- Precipitation Probability by Quantity.

○ Monthly Precipitation Listings
    Monthly Totals
    Daily Extreme

Snowfall

- Daily Extreme and Average
- Daily Average

○ Monthly Snowfall Listings
    Monthly Totals

Snowdepth

- Daily Extreme and Average
- Daily Average

Heating Degree Days

- Daily Average

○ Monthly HDD Listings
    Monthly Totals(*)

Cooling Degree Days

- Daily Average

○ Monthly CDD Listings
    Monthly Totals(*)

Growing Degree Days

○ Monthly GDD Listings
    Monthly Total Base 40 (*)
    Monthly Total Base 50 (*)

Period of Record Data Tables

- Daily Summary Stats (~55 KB)
- Monthly Tabular data (~2 KB)

Daily Data

Graph and Lister (*)
Lister (*)

Western Regional Climate Center,
wrcc@dri.edu
.

WOODLAND HLS PIERCE CL, CALIFORNIA (049785)

Period of Record Monthly Climate Summary

Period of Record : 7/ 1/1949 to 9/30/2012

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	68.0	69.8	72.5	76.8	81.2	87.4	95.0	95.5	92.0	84.0	74.9	68.7	80.5
Average Min. Temperature (F)	39.5	40.7	42.0	44.7	49.2	53.1	57.3	57.5	54.8	49.2	42.8	38.8	47.5
Average Total Precipitation (in.)	3.75	3.84	2.68	1.08	0.27	0.04	0.01	0.09	0.16	0.53	1.70	2.33	16.47
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Appendix B.
Protected Tree Report

Carlberg ASSOCIATES
Horticulturists and
Registered Consulting
ARBORISTS

CITY OF LOS ANGELES PROTECTED TREE REPORT
SHERMAN OAKS CENTER FOR ENRICHED STUDIES

18605 ERWIN STREET
LOS ANGELES, CALIFORNIA 91335

SUBMITTED TO:

HERBERT NG
HARLEY ELLIS DEVEREAUX
601 SOUTH FIGUEROA STREET, SUITE 500
LOS ANGELES, CALIFORNIA 90017

PREPARED BY:

CY CARLBERG
ASCA REGISTERED CONSULTING ARBORIST #405
ISA CERTIFIED ARBORIST #WE 0575A
ISA QUALIFIED TREE RISK ASSESSOR
CAUFC CERTIFIED URBAN FORESTER #013

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80 West Sierra Madre Boulevard, #241
Sierra Madre, California 91024
Office: 626.428.5072

www.cycarlberg.com

DECEMBER 15, 2016

CITY OF LOS ANGELES PROTECTED TREE REPORT – SHERMAN OAKS CENTER FOR ENRICHED STUDIES - 18605 ERWIN STREET, LOS ANGELES, CALIFORNIA

TABLE OF CONTENTS

Carlberg ASSOCIATES
Horticulturists and
Registered Consulting
ARBORISTS

December 2, 2016

Mr. Herbert Ng
Harley Ellis Devereaux
607 South Figueroa Street, Suite 500
Los Angeles, California 90017

Re: Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Los Angeles, California
Protected and Significant Tree Report

Dear Mr. Ng,

EXECUTIVE SUMMARY

This tree report was prepared in accordance with the City of Los Angeles Tree Preservation Ordinance. Three protected coast live oak trees may be affected (but not removed) by the proposed Comprehensive Modernization Project on the Sherman Oaks Center for Enriched Studies campus, located at 18605 Erwin Street, in the City of Los Angeles. There are three protected oak (*Quercus agrifolia*) trees and 128 non-protected trees on the subject property. No City of Los Angeles rights-of-way trees are associated with this project. No other trees considered “protected” by the City of Los Angeles Tree Preservation Ordinance No. 177.404 are affected. There are no off-site trees on contiguous properties that can be affected by the construction of the proposed project.

BACKGROUND AND ASSIGNMENT

The Los Angeles Unified School District is proposing renovations on the approximate 21.53-acre lot. The 131 total on-site trees are scattered within the property limits. We were retained to visit the property, inventory all trees, evaluate the potential impacts of construction, make recommendations for the protection of trees to remain, and prepare a Protected Tree Report for submittal to the City of Los Angeles. We used the Site Plan – Scheme 2a (AHBE Landscape Architects, December 8, 2016) to determine the impacts to the protected trees. This report is based on our site visits on June 28 and 29, 2016.

This report reflects the impacts resulting from the construction of the proposed improvements related to the Comprehensive Modernization Project.

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OBSERVATIONS

We inventoried 131 trees of various species on the subject property. Tree trunks and canopies (driplines) were recorded in the field, from grade, using the topography provided to us by the landscape architect. The on-site trees were numbered and tagged with an embossed aluminum numbered tag.

Exhibit D summarizes the inventoried trees, their protected status, and their proposed dispositions. Captioned photographs and exhibits at the end of this report illustrate site context, tree locations, tree structure, and vigor. A full-sized copy of the 'Tree Location Exhibit' is included in a back pocket at the end of this report.

DISCUSSION

There are numerous potential consequences related to residential construction that may affect trees during and after a typical construction process. They are as follows and are discussed below:

- EXCAVATION / TRENCHING - ROOT SEVERANCE
- SOIL COMPACTION (DURING AND POST-CONSTRUCTION)
- ALTERATION OF THE WATER TABLE/SITE DRAINAGE
- SUBSTANTIAL TRIMMING OF CANOPY OR ROOTS
- MECHANICAL DAMAGE
- IRRIGATION

A. *Excavation/Trenching—Root Severance*

Trenching can include excavation for irrigation, utility, or drainage lines. Trenching and excavation can also be required for foundations of structures and free-standing walls. Trenching and excavation removes soil and tree roots. When performed in the critical root zone (approximately 5x the trunk diameter of any tree) or within the dripline (outer edge of the natural canopy), there is the potential to remove large areas of root mass, and to shatter and tear roots that will remain connected to the tree(s). Torn and shattered roots cannot callous over or generate new roots in the manner of cleanly-cut roots. Torn and shattered roots are potentially unstable, are entry points for disease and decay organisms, and eventually die. Significant root loss and/or severance can be critical to the health and structure of trees to remain in a landscape.

B. *Soil Compaction*

Soil compaction is a complex set of physical, chemical, and biological constraints on tree growth. Principal components leading to limited growth are the loss of aeration and pore space, poor gas exchange with the atmosphere, lack of available water, and mechanical hindrance of root growth. Soil compaction is considered to be the largest single factor responsible for the decline of trees on construction sites.

C. *Changes in Grade*

Changes in grade, by the addition or removal of soil (filling or cutting), can be injurious. Lowering the grade around trees can have immediate and long-term effects on trees. The addition of soil and compaction for common engineering practices also results in long-term effects on trees. Typically, the vast majority of the root mass exists within the top three feet of soil, and most of the fine roots active in water and nutrient absorption are in the top 12 inches.

D. *Alteration of the Water Table/Site Drainage*

The water table is the upper surface of the zone in which soil macropores are saturated with water; water tables may vary seasonally. Rather than a flat, static surface, the water moves down a gradient. Its depth varies, depending on the structure of the soil and rocks through which it flows. A perched water table may form in soils that have impermeable strata. Swamps are created where the water table intersects level ground.

Structures such as footings, basements, subterranean buildings, and retaining walls may intercept impermeable layers in the soil on which water perches. If adequate drainage is not provided, the water table uphill may gradually rise and interfere with tree roots. This type of damage usually takes a period of time to be recognized and diagnosed.[1]

Trees are particularly susceptible to root infections, such as Armillaria and Phytophthora. Both of these fungal diseases can progressively weaken a root system, resulting in dead branches in the canopy of the tree, loss of stability of the entire tree because of decaying roots, and premature death of the tree. Trees form roots in accordance with existing soil composition and water availability. Minor drainage changes in the winter and spring months are significant to the health of the trees.

E. *Canopy And Root Pruning*

Leaves perform vital functions for trees. Through photosynthesis, they manufacture sugars that feed the tree and are used to create the building blocks of wood. Leaves help to move water and nutrients up from the roots and around the tree through their vascular system and cool the tree down through transpiration. They moderate temperatures beneath the tree, lessen the drying action of winds, and intercept rainfall, which reduces erosion. On the ground, they moderate soil temperatures, retain moisture, and as they decompose, return their nutrients back to the soil to be recycled and reused by the tree. A healthy canopy of leaves is essential to ensure an adequate food supply for the roots to perform their important functions.

Typically, root systems extend outward past the dripline, two to four times the diameter of the average tree's crown. Main root functions include water and mineral conduction, food and water storage, and anchorage of the tree to the soil. Root systems consist of short-lived, fine-textured, feeder roots and larger, woody, perennial roots. Feeder roots, while averaging only 1/16 inch in diameter, constitute the major portion of the root system's surface area. Feeder roots act like sponges, growing predominantly outward and upward from the large roots near the soil surface where minerals, water and oxygen are usually abundant. Larger, woody roots and their subordinates tend to annually increase in diameter and grow horizontally. Predominantly located in the top 6 to 24 inches of the soil, these structural and storage roots usually do not grow deeper than three to seven feet. Root growth is generally inhibited by soil compaction and temperature. As the depth increases, soil compaction increases, and the availability of water, minerals, oxygen, and soil temperature all decrease.

Removal of significant amounts of the canopy and/or root system can lead to both immediate and long-term detrimental effects on trees. Effects can be physiological, structural, or both.

F. Protection Against Mechanical Damage/Fencing

Fencing is a temporary enclosure erected around a tree to enclose as much of its safety zone as possible. Fences are critical to (1) prevent direct contact and damage to the canopy, branches, and

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[1] Nelda Matheny and James R. Clark, Trees and Development: A Technical Guide to Preservation of Trees During Land Development, (Champaign, Illinois: International Society of Arboriculture, 1998), pp. 88-89.

trunk, (2) preserve roots and soil in an intact and non-compacted state, and (3) identify the Tree Protection Zone. Fencing must be in place before demolition or the initiation of construction, and remain until adjacent construction activity no longer threatens tree health.

G. Irrigation

Trees that have suffered root loss may not be able to exploit as large a soil volume as before injury. Also, changed patterns of drainage may divert water away from trees. In either case, trees may benefit from supplemental irrigation. The following are general guidelines:

- ***The amount of water applied must be appropriate to the species.***
- ***Light, infrequent irrigations should be avoided.***
- ***Excess irrigation from new landscaping should be avoided. Runoff from plantings should be minimized and/or directed away from trees.***
- ***Wetting the trunk should be avoided.***[2]

Construction Impacts

Implementation of the project will result in **removal** of 21 non-protected trees (Trees #4, 5, 6, 53, 54, 55, 56, 57, 58, 59, 94, 95, 96, 97, 99, 100, 101, 122, 123, 124, and 125) of various species. None of the three protected trees (nos. 30, 43, 44) are being proposed for removal. The unprotected trees are being proposed for removal due to their proximity to the required site improvements for the campus modernization project.

In the time since the June 2016 inventory, fourteen non-protected trees have been removed. Trees #8, 20, 21, 22, 42, 48, 50, 52, 65, 90, 93, 103, 108, and 115 were removed by the District as a result of required utility work on the campus.

Tree #30 (coast live oak, a protected tree) will have an encroachment within its protected zone during proposed improvements to the existing parking lot. The precise details on the parking lot improvements are not known at this time and actual impacts to the root system cannot be determined. It is recommended that every effort be made to reduce or eliminate excavation within the protected zone of this tree. We recommend that excavation be performed under an arborist's guidance.

CONCLUSION AND RECOMMENDATIONS

In my professional opinion, the project can proceed as designed and if the following conditions are met:

- Any demolition, digging, excavating, or trenching within the protected zone of any tree to remain is monitored by a qualified arborist.
- Exposed roots to remain should be covered with burlap, carpet remnants or other material that may be kept moist until soil can be replaced.
- This report is part of the set of plans given to the contractor. The contractor should be familiar with the specific instructions and responsibilities pertaining to protected trees. It is recommended that a professional arborist be retained and meet with the contractor and his personnel prior to commencement of the project.

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[2] See Matheny and Clark, p. 125.

- If canopy pruning is found to be necessary for trees to remain, it should only be performed by a qualified ISA Certified Arborist or ISA Certified Tree Worker.
- Protected trees shall not be removed until/unless approval is granted by the City of Los Angeles' Urban Forestry Division.
- Equipment, materials, and vehicles shall not be stored, parked, or operated within the protected zone of trees to remain.
- Equipment with overhead exhaust shall not be placed in such a manner as to scorch overhanging branches or foliage. Smaller equipment shall be used in such areas as deemed necessary by the monitoring arborist.
- Five (5) foot high chain link fencing shall be installed as illustrated on the Tree Protection Plan prior to submission of this report to the Urban Forestry Division of the City of Los Angeles (reports may not be deemed complete by the Division if fencing is not in place). Photographs of the fencing should be submitted with the report. When performing their inspection, Urban Forestry requires that the protective fencing be in place.
- A 'Warning' sign is prominently displayed on each protective enclosure. The sign will be a minimum of 8.5 inches x 11 inches and clearly state the following:

TREE PROTECTION ZONE
THIS FENCE SHALL NOT BE REMOVED

Please feel welcome to contact me at our Santa Monica office if you have any immediate questions or concerns.

Respectfully submitted,

Cy Carlberg, Registered Consulting Arborist
Principal, Carlberg Associates

EXHIBIT A – AERIAL IMAGE OF SHERMAN OAKS CENTER FOR ENRICHED STUDIES

<u>Subject Property</u>
18605 Erwin Street
Los Angeles, California

EXHIBIT B – TREE INVENTORY

Sherman Oaks Center for Enriched Studies
Tree Inventory

Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) in inches	Height (in feet)	Canopy Spread N/E/S/W (in feet)	Physiological Condition (A-F)	Structural Condition (A-F)	Disposition (Retain, Remove, Relocate)	City of Los Angeles Protected Tree - Y/N	Comments	Photos
1	Crape Myrtle	*Lagerstroemia indica*	9	15	10/12/10/12	B	B	Retain	No	columns of decay on south & west	6960-62
2	Crape Myrtle	*Lagerstroemia indica*	8.5 at 4' feet	15	10/10/10/10	B	B	Retain	No	columns of decay on south & west	6963-65
3	Crape Myrtle	*Lagerstroemia indica*	8	15	11/12/12/12	B	B	Retain	No	column of decay on northeast	6966-67
4	Crape Myrtle	*Lagerstroemia indica*	6 at 4' feet	15	8/8/10/10	B	A	Retain	No	small cavity on east	6968-69
5	Crape Myrtle	*Lagerstroemia indica*	6.5	15	10/10/10/12	B	B	Retain	No	column of decay on northeast	6970-71
6	American Sweetgum	*Liquidambar styraciflua*	20	35	12/12/12/10	B	B	Retain	No	recently topped, ivy at base	6972-73
7	Magnolia	*Magnolia grandiflora*	12	30	12/12/10/10	B	B	Retain	No	column of decay on west, recently pruned	6974-75
8	Flowering Pear	*Pyrus kawakamii*	8.5	15	10/10/12/10	B	B	Retain	No	recently topped, fireblight	6976
9	Crape Myrtle	*Lagerstroemia indica*	10	15	10/12/10/12	B	B	Retain	No	recently pruned, nice tree	6977
10	Crape Myrtle	*Lagerstroemia indica*	8	20	10/7/10/10	B	B	Retain	No	recently pruned, slight lean southwest	6978-79
11	Coastal Redwood	*Sequoia sempervirens*	9	30	10/10/10/10	B	A	Retain	No	doing good	6980
12	Coastal Redwood	*Sequoia sempervirens*	6.5	25	7/7/7/7	B	A	Retain	No	doing good	6981
13	Coastal Redwood	*Sequoia sempervirens*	8	30	7/7/7/7	B	A	Retain	No	doing good	6982
14	Coastal Redwood	*Sequoia sempervirens*	5.5	25	7/7/7/7	B	A	Retain	No	doing good	6983
15	Coastal Redwood	*Sequoia sempervirens*	6	25	7/7/7/7	B	A	Retain	No	doing good	6984
16	Coastal Redwood	*Sequoia sempervirens*	10	35	10/10/10/10	A	A	Retain	No	doing good	6985
17	Coastal Redwood	*Sequoia sempervirens*	3	13	4/4/4/4	B	A	Retain	No	recently planted	6986
18	Flowering Pear	*Pyrus kawakamii*	5.5	10	3/10/10/5	B	C	Retain	No	fireblight, mechanical damage on north, northwest	6987-88
19	Shamel Ash	*Fraxinus uhdei*	15, 22	40	12/12/15/15	B	B	Retain	No	recently topped, raised	6989-90
20	Coastal Redwood	*Sequoia sempervirens*	3	10	4/4/4/4	B	A	Retain	No	recently planted	6991
21	Coastal Redwood	*Sequoia sempervirens*	3	10	4/4/4/4	B	A	Retain	No	recently planted	6992
22	Coastal Redwood	*Sequoia sempervirens*	40	60	15/13/10/12	C	B	Retain	No	multiple codominant stems, moderate dieback, recently pruned	6993-94
23	Coastal Redwood	*Sequoia sempervirens*	27	60	12/10/8/10	C	B	Retain	No	codominant stems on top, moderate dieback, recently pruned	6995-96
24	Hollywood Juniper	*Juniperus chinensis 'Torulosa'*	16 at 4' feet	20	2/7/12/15	B	B	Retain	No	recently pruned	6997
25	Hollywood Juniper	*Juniperus chinensis 'Torulosa'*	18 at 3' feet	20	2/10/15/15	B	B	Retain	No	recently pruned	6998
26	Coastal Redwood	*Sequoia sempervirens*	10	25	7/3/4/6	C	B	Retain	No	moderate dieback, recently pruned	6999
27	Port Orford cedar	*Chamaecyparis lawsoniana*	10	15	6/3/10/10	B	B	Retain	No	recently pruned	7000-02
28	Coastal Redwood	*Sequoia sempervirens*	16	30	10/10/6/10	B-	B	Retain	No	moderate dieback, codominant stems, column of decay on north	7003-04

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29	Port Orford cedar	*Chamaecyparis lawsoniana*	8, 21	30	15/12/10/15	B	B	Retain	No	recently pruned, ivy at base	7005-06
30	Coast Live Oak	*Quercus agrifolia*	17, 17	30	21/20/21/27	B	B	Retain	Yes		7007, 7011
31	Shamel Ash	*Fraxinus uhdei*	14, 18.5, 20	40	15/15/15/18	A-	B	Remove	No	recently topped, raised	7008-10
32	Shamel Ash	*Fraxinus uhdei*	27.5	50	15/10/12/15	A	A	Retain	No	root pruning on south, recently pruned	7012-14
33	Shamel Ash	*Fraxinus uhdei*	23, 37	50	15/15/17/18	A	B	Retain	No	column of decay on south, codominant stems at base	7015-16
34	Olive	*Olea europaea*	4, 5, 6	20	12/9/10/10	B	B	Retain	No	recently pruned, on fence	7017-18
35	Shamel Ash	*Fraxinus uhdei*	13, 16	40	10/11/15/11	A	B	Retain	No	recently topped, codominant stems	7019-20
36	Brazilian Pepper	*Schinus terebinthifolius*	31	40	11/30/21/20	B	B	Retain	No	recently topped, codominant stems at 7 feet	7021-22
37	Juniper	*Juniperus spp.*	22 at 4' feet	40	12/12/17/15	C	B	Retain	No	heavily pruned, moderate dieback, bleeding, boring pest	7023-26
38	Mexican Fan Palm	*Washingtonia robusta*	BT 30'	35	7/7/7/7	A	A	Retain	No	great palm	7027
39	Olive	*Olea europaea*	3, 3, 6	20	9/7/6/14	A	B	Retain	No	recently pruned, rubs on palm	7028
40	Mimosa	*Albizia julibrissin*	7.5, 8	35	5/12/15/15	A	B	Retain	No	codominant stems at base	7029-30
41	Stone Pine	*Pinus pinea*	24	50	27/20/18/19	B	A	Retain	No	recently pruned	7031-32
42	Robinia	*Robinia pseudoacacia*	5, 11, 11	20	15/13/3/10	C	C	Retain	No	major dieback, recently topped, column of decay on south	7033-34
43	Coast Live Oak	*Quercus agrifolia*	37	45	21/20/30/30	A	A	Retain	Yes	beautiful oak	7035-36, 7038L
44	Coast Live Oak	*Quercus agrifolia*	41.5	45	27/41/39/15	A	A	Retain	Yes	beautiful oak	7037-38C
45	Aleppo Pine	*Pinus halepensis*	24, 29	60	30/18/30/30	A	B	Retain	No	codominant stems at base	7038R, 7039-41
46	American Sweetgum	*Liquidambar styraciflua*	19	40	10/12/11/6	A	B	Retain	No	recently topped	7042-43
47	Black Walnut	*Juglans nigra*	15.5	30	12/12/10/11	A	A	Retain	No	recently topped	7044-45
48	Shamel Ash	*Fraxinus uhdei*	59	50	20/20/27/21	A	B	Retain	No	recently topped, codominant stems at 8 feet	7046-47
49	Chinese Elm	*Ulmus parvifolia*	13	30	15/15/12/12	A	B	Retain	No	codominant stems at 10 feet, recently pruned	7048-49
50	Mulberry	*Morus alba*	14	20	10/10/9/10	B	B	Retain	No	recently topped, bleeding on east	7050-52
51	African Fern Pine	*Afrocarpus falcatus*	4, 4, 5, 6	15	1/5/10/10	B	B	Retain	No	recently topped	7053
52	Hollywood Juniper	*Juniperus chinensis 'Torulosa'*	14	20	6/10/10/7	B	B	Retain	No	recently pruned, slight lean south	7054-55
53	Shiny Xylosma	*Xylosma congestum*	8.5	20	15/13/0/9	B	B	Remove	No	recently pruned	7056-57L
54	Shiny Xylosma	*Xylosma congestum*	3.5, 4.5, 6	20	8/11/8/8	B	B	Remove	No	recently pruned	7056-57C
55	Shiny Xylosma	*Xylosma congestum*	6.5	20	10/15/0/0	B	B	Remove	No	recently pruned	7056-57R
56	Chinese Elm	*Ulmus parvifolia*	22	40	27/30/15/18	B	B	Remove	No	recently pruned, topped	7058

Sherman Oaks Center for Enriched Studies
Tree Inventory

Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) in inches	Height (in feet)	Canopy Spread N/E/S/W (in feet)	Physiological Condition (A-F)	Structural Condition (A-F)	Disposition (Retain, Remove, Relocate)	City of Los Angeles Protected Tree - Y/N	Comments	Photos
57	Chinese Elm	*Ulmus parvifolia*	22	30	18/27/15/13	B	B	Remove	No	history of breakage, recently topped, epicormic growth	7059
58	Mulberry	*Morus alba*	8	15	10/7/7/10	A	A	Remove	No	recently topped	7060
59	Mulberry	*Morus alba*	8.5	15	9/9/9/12	A	A	Remove	No	recently topped	7061
60	Mulberry	*Morus alba*	21	20	12/12/6/10	D	C	Retain	No	major dieback, heart rot, cavities, bleeding, deadwood, bark checking	7062-66
61	Shamel Ash	*Fraxinus uhdei*	26.5	45	15/15/15/18	B	B	Retain	No	recently pruned	7067
62	Red Ironbark	*Eucalyptus sideroxylon*	41	45	9/12/9/12	B	B	Retain	No	history of breakage, recently topped, codominant stems at 15 feet	7068-69
63	Australian Willow	*Geijera parviflora*	4, 6	15	6/9/9/6	A	A	Retain	No		7070
64	Australian Willow	*Geijera parviflora*	3, 3, 4, 5, 5.5, 5.5, 6, 6	20	12/12/12/9	A	A	Retain	No	recently pruned	7071
65	Jacaranda	*Jacaranda mimosifolia*	6, 7.5, 8	20	10/12/15/12	A	B	Retain	No	recently pruned, trunk bow to north	7072
66	Stone Pine	*Pinus pinea*	26	40	18/18/15/15	A	B	Retain	No	nice pine, recently pruned	7073
67	Chinese Elm	*Ulmus parvifolia*	23	50	21/21/15/21	A	A	Retain	No	recently pruned, codominant stems at 10 feet, mechanical damage to roots	7074
68	Chinese Elm	*Ulmus parvifolia*	23	40	24/12/24/21	A	B	Retain	No	recently pruned, codoms, bow to south codominant stem	7075
69	Chinese Elm	*Ulmus parvifolia*	27	40	24/27/12/25	A	B	Retain	No	recently pruned, codominant stems	7076
70	Chinese Elm	*Ulmus parvifolia*	22.5	35	24/18/15/21	A	A	Retain	No	recently pruned	7077
71	Port Orford cedar	*Chamaecyparis lawsoniana*	7.5	20	0/0/6/4	A	B	Retain	No	recently pruned, raised, leans west	7078
72	Port Orford cedar	*Chamaecyparis lawsoniana*	8.5	25	4/0/5/12	A	B	Retain	No	recently pruned, raised, leans west	7078
73	Port Orford cedar	*Chamaecyparis lawsoniana*	8	25	6/0/6/12	A	B	Retain	No	recently pruned, raised, leans west	7078
74	Port Orford cedar	*Chamaecyparis lawsoniana*	10.5	25	12/0/0/15	A	B	Retain	No	recently pruned	7078
75	Port Orford cedar	*Chamaecyparis lawsoniana*	8, 8.5	25	12/0/6/12	A	B	Retain	No	recently pruned	7078
76	Port Orford cedar	*Chamaecyparis lawsoniana*	7	25	10/0/5/5	A	A	Retain	No	recently pruned	7078
77	Port Orford cedar	*Chamaecyparis lawsoniana*	10	25	10/6/3/6	A	A	Retain	No	recently pruned	7078
78	Port Orford cedar	*Chamaecyparis lawsoniana*	7.5, 9.5	25	10/0/4/10	A	A	Retain	No	recently pruned	7078
79	Port Orford cedar	*Chamaecyparis lawsoniana*	8.5	25	5/0/6/10	A	A	Retain	No	recently pruned	7078
80	Port Orford cedar	*Chamaecyparis lawsoniana*	10	25	10/0/4/10	A	A	Retain	No	recently pruned	7078
81	Port Orford cedar	*Chamaecyparis lawsoniana*	9	25	12/0/6/10	A	A	Retain	No	recently pruned	7078
82	Port Orford cedar	*Chamaecyparis lawsoniana*	8, 10	25	12/0/10/12	A	A	Retain	No	recently pruned	7078
83	Port Orford cedar	*Chamaecyparis lawsoniana*	12	25	5/8/8/9	A	A	Retain	No	recently pruned	7079
84	Port Orford cedar	*Chamaecyparis lawsoniana*	12	25	0/0/6/6	A	A	Retain	No	recently pruned	7079

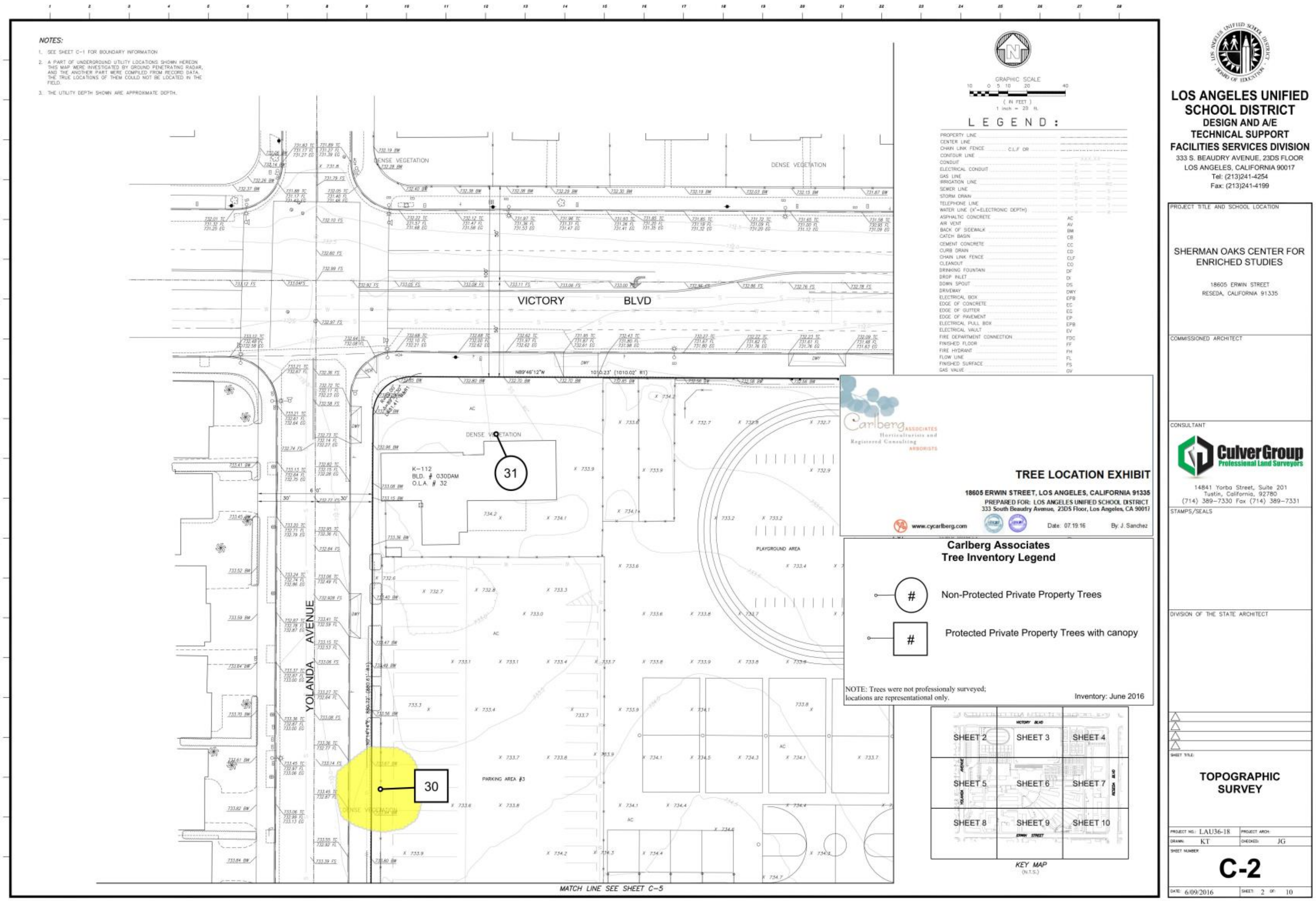
Sherman Oaks Center for Enriched Studies
Tree Inventory

Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) in inches	Height (in feet)	Canopy Spread N/E/S/W (in feet)	Physiological Condition (A-F)	Structural Condition (A-F)	Disposition (Retain, Remove, Relocate)	City of Los Angeles Protected Tree - Y/N	Comments	Photos
85	Port Orford cedar	*Chamaecyparis lawsoniana*	8.5	25	0/4/9/6	A	A	Retain	No	recently pruned	7079
86	Port Orford cedar	*Chamaecyparis lawsoniana*	8, 10	25	12/12/9/17	A	A	Retain	No	recently pruned	7079
87	Australian Willow	*Geijera parviflora*	3, 3, 3, 3, 4, 4, 5	20	12/9/9/8	A	A	Retain	No	recently pruned	7080
88	Mulberry	*Morus alba*	22.5	30	15/15/12/12	C	C	Retain	No	topped, bleeding, cavities, column of decay, hanger	7081-85
89	Mulberry	*Morus alba*	22	30	10/15/9/6	C	C	Retain	No	topped, bleeding, cavities, cankers, decay at old cuts, history of breakage	7086-91
90	Stone Pine	*Pinus pinea*	32.5	50	21/18/18/20	B	B	Retain	No	heavily pruned, codominant stems	7092
91	Magnolia	*Magnolia grandiflora*	11	25	9/6/7/9	A	B	Retain	No	recently pruned	7093
92	Aleppo Pine	*Pinus halepensis*	4, 6.5	20	12/10/6/3	A	B	Retain	No		7094
93	Shamel Ash	*Fraxinus uhdei*	28.5	60	12/12/16/10	A	A	Retain	No	topped, recently pruned	7095
94	African Fern Pine	*Afrocarpus falcatus*	26	40	15/15/18/18	A	A	Remove	No	recently pruned	7096L
95	African Fern Pine	*Afrocarpus falcatus*	19	40	18/15/12/10	A	A	Remove	No	recently pruned	7096R
96	African Fern Pine	*Afrocarpus falcatus*	22	35	15/6/15/18	A	A	Remove	No	recently pruned, topped, mechanical damage to roots	7097L
97	African Fern Pine	*Afrocarpus falcatus*	19	35	15/18/15/6	A	A	Remove	No	recently pruned, topped, mechanical damage to roots	7097R
98	Shamel Ash	*Fraxinus uhdei*	49.5	50	21/21/21/12	A	A	Retain	No	great ash, mechanical damage to roots, 12 x 12 cutout	7098
99	Shamel Ash	*Fraxinus uhdei*	21.5	30	10/12/15/12	B	A	Remove	No	topped	7099
100	Shamel Ash	*Fraxinus uhdei*	28	40	9/12/6/14	B	B	Remove	No	codominant stems, topped	7100
101	Shamel Ash	*Fraxinus uhdei*	33	35	9/12/13/12	B	B	Remove	No	codominant stems, topped, small cavity	7101
102	Shamel Ash	*Fraxinus uhdei*	22.5	35	6/12/12/6	B	A	Retain	No	codominant stems, topped, mechanical damage to roots, girdling roots	7102
103	Shamel Ash	*Fraxinus uhdei*	21.5	30	9/9/9/8	A	A	Retain	No	codominant stems, topped, mechanical damage to roots	7103
104	Shamel Ash	*Fraxinus uhdei*	29	30	9/10/15/12	B	A	Retain	No	topped, leans southeast	7104
105	Shamel Ash	*Fraxinus uhdei*	29	35	9/9/12/12	A	A	Retain	No	topped	7105
106	Shamel Ash	Fraxinus uhdei	30.5	30	12/6/15/10	B	A	Retain	No	topped, low live crown ratio	7106
107	Shamel Ash	Fraxinus uhdei	39	25	9/9/12/9	B	B	Retain	No	topped	7107
108	Shamel Ash	*Fraxinus uhdei*	24.5	30	9/10/12/13	A	A	Retain	No	topped, 6 inch cavity on east	7108-09
109	Shamel Ash	*Fraxinus uhdei*	19	30	10/12/15/10	A	A	Retain	No	topped	7110
110	Shamel Ash	*Fraxinus uhdei*	22	25	6/9/12/13	A	A	Retain	No	topped	7111
111	Shamel Ash	*Fraxinus uhdei*	41	40	18/15/21/15	A	A	Retain	No	topped	7112
112	Shamel Ash	*Fraxinus uhdei*	17.5	20	6/5/6/6	A	A	Retain	No	topped	7113

Sherman Oaks Center for Enriched Studies
Tree Inventory

Tree #	Common Name	Botanical Name	Diameter at 4.5 feet (dbh) in inches	Height (in feet)	Canopy Spread N/E/S/W (in feet)	Physiological Condition (A-F)	Structural Condition (A-F)	Disposition (Retain, Remove, Relocate)	City of Los Angeles Protected Tree - Y/N	Comments	Photos
113	Shamel Ash	*Fraxinus uhdei*	24	30	10/10/10/10	A	B	Retain	No	topped, termites at base	7114
114	Shamel Ash	*Fraxinus uhdei*	17.5	20	9/6/6/4	A	B	Retain	No	topped	7115
115	Shamel Ash	*Fraxinus uhdei*	29.5	30	8/9/9/7	A	A	Retain	No	topped	7116
116	Shamel Ash	*Fraxinus uhdei*	23	30	9/12/10/7	B	A	Retain	No	topped	7117
117	Mexican Fan Palm	*Washingtonia robusta*	BT 25'	30	6/6/6/6	A	A	Retain	No	nice palm	7118
118	Shamel Ash	*Fraxinus uhdei*	24	30	12/12/9/10	A	A	Retain	No	topped	7119
119	Shamel Ash	*Fraxinus uhdei*	31	25	5/9/6/4	B	C	Retain	No	internal decay on west, 7 foot column of decay on north	7120-22
120	Shamel Ash	*Fraxinus uhdei*	29	30	9/12/12/10	B	A	Retain	No	topped, mechanical damage to roots	7123
121	Purple Leaf Plum	*Prunus cerasifera*	6	12	3/7/6/4	B	C	Retain	No	recently pruned, bow in trunk, trunk splitting	7124-27
122	Shamel Ash	*Fraxinus uhdei*	3, 4, 4, 5, 5	25	6/3/6/6	A	A	Remove	No	recently pruned	7128
123	Shamel Ash	*Fraxinus uhdei*	8, 9	25	8/7/6/7	A	A	Remove	No	recently pruned	7129
124	Shamel Ash	*Fraxinus uhdei*	20.5	25	7/9/9/9	B	C	Remove	No	topped, sounds hollow all around	7130-32
125	Shamel Ash	*Fraxinus uhdei*	17.5	25	6/10/15/12	B	C	Remove	No	sounds hollow, cavities, carpenter ants	7133-35
126	Shamel Ash	*Fraxinus uhdei*	21.5	30	9/12/9/6	B	B	Retain	No	sounds hollow on south, topped, mechanical damage to roots	7136-37
127	Shamel Ash	*Fraxinus uhdei*	32	30	10/15/13/15	A	A	Retain	No	topped, codominant stems at 10 feet	7138
128	Flowering Pear	Pyrus kawakamii	21.5	25	7/15/15/12	A	A	Retain	No	topped, fireblight	7139
129	Shamel Ash	*Fraxinus uhdei*	41	40	10/15/15/15	B	B	Retain	No	topped, carpenter ants, column of decay	7140-44
130	Magnolia	*Magnolia grandiflora*	16	30	15/12/12/10	A	A	Retain	No	recently pruned, deadwood	7145
131	Shamel Ash	*Fraxinus uhdei*	45	45	18/18/21/21	A	A	Retain	No	topped, codominant stems, nice ash	7146-47

EXHIBIT C – REDUCED COPY OF TREE LOCATION MAPS

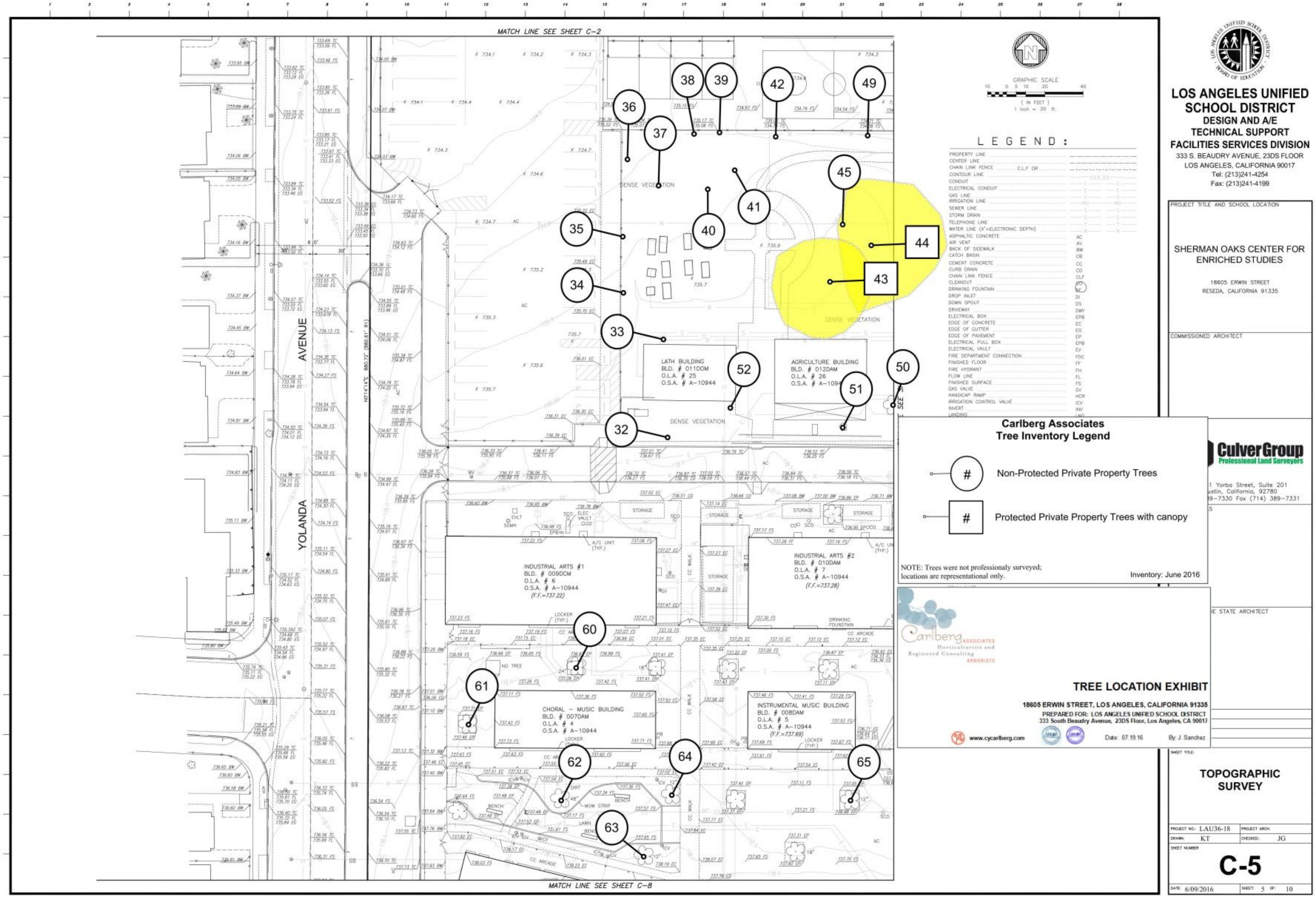


NOTES:

1. SEE SHEET C-1 FOR BOUNDARY INFORMATION
2. A PART OF UNDERGROUND UTILITY LOCATIONS SHOWN HEREON THIS MAP WERE INVESTIGATED BY GROUND PENETRATING RADAR, AND THE ANOTHER PART WERE COMPILED FROM RECORD DATA. THE TRUE LOCATIONS OF THEM COULD NOT BE LOCATED IN THE FIELD.
3. THE UTILITY DEPTH SHOWN ARE APPROXIMATE DEPTH.

NOTE: Trees were not professionaly surveyed; locations are representational only.

Inventory: June 2016


MATCH LINE SEE SHEET C-2
38
39
42
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43
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32
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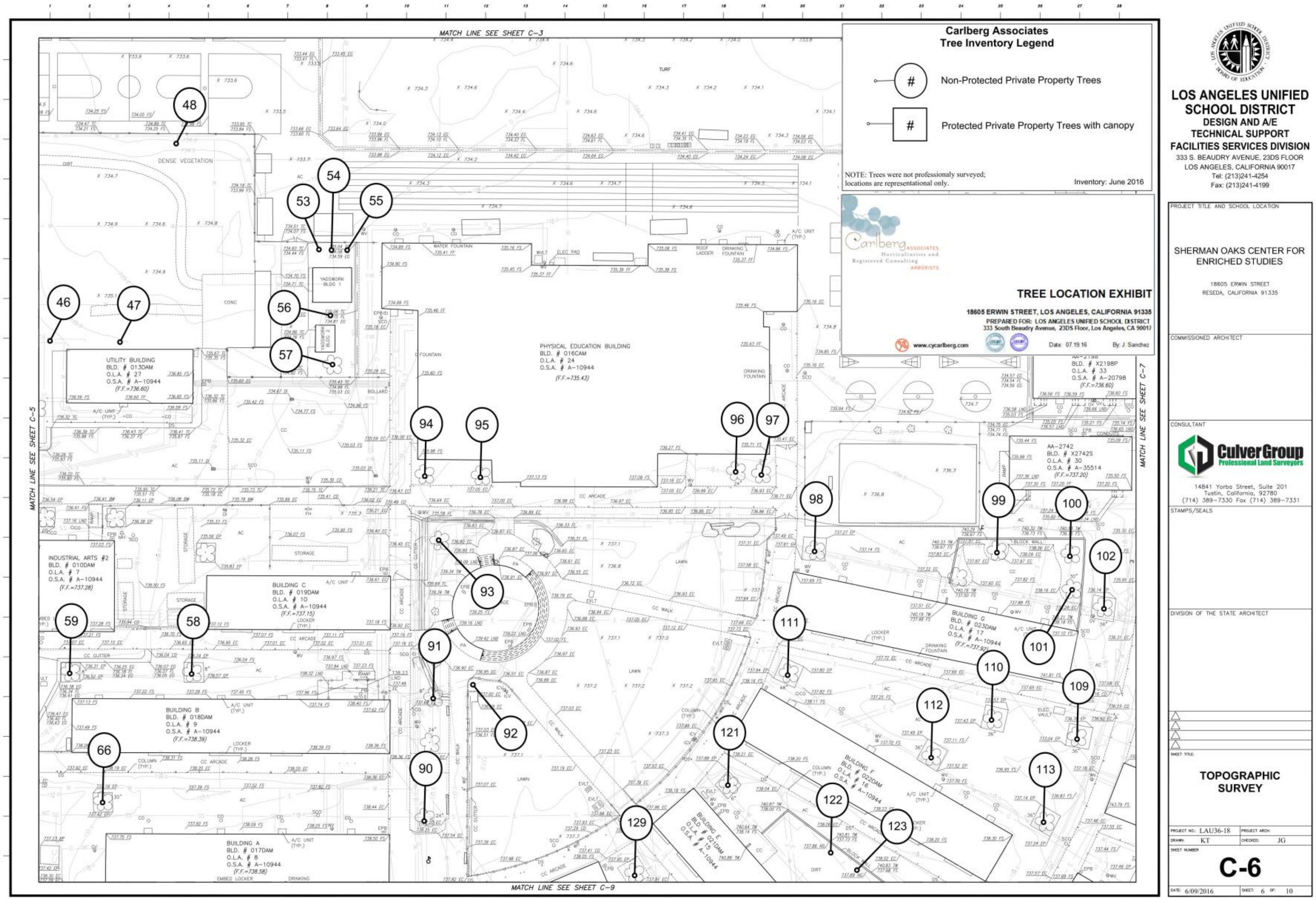
61
62
64
65
63
YOLANDA AVENUE
DENSE VEGETATION
LATH BUILDING BLD. # 011DOM O.L.A. # 25 O.S.A. # A-10944
AGRICULTURE BUILDING BLD. # 012DAM O.L.A. # 26 O.S.A. # A-10944
INDUSTRIAL ARTS #1 BLD. # 009DCM O.L.A. # 6 O.S.A. # A-10944 (F.F.=737.22)
INDUSTRIAL ARTS #2 BLD. # 010DAM O.L.A. # 7 O.S.A. # A-10944 (F.F.=737.28)
CHORAL – MUSIC BUILDING BLD. # 007DAM O.L.A. # 4 O.S.A. # A-10944
INSTRUMENTAL MUSIC BUILDING BLD. # 008DAM O.L.A. # 5 O.S.A. # A-10944 (F.F.=737.69)
STORAGE
LOCKER (TYP.)
NO TREE
CC ARCADE
MATCH LINE SEE SHEET C-8
GRAPHIC SCALE
(IN FEET) 1 inch = 20 ft.
LEGEND:
Carlberg Associates
Tree Inventory Legend
Non-Protected Private Property Trees
Protected Private Property Trees with canopy
NOTE: Trees were not professionally surveyed; locations are representational only.
Inventory: June 2016
Carlberg ASSOCIATES Horticulturists and Registered Consulting ARBORISTS
TREE LOCATION EXHIBIT
18605 ERWIN STREET, LOS ANGELES, CALIFORNIA 91335
PREPARED FOR: LOS ANGELES UNIFIED SCHOOL DISTRICT
333 South Beaudry Avenue, 23DS Floor, Los Angeles, CA 90017
www.cycarlberg.com
Date: 07.19.16
By: J. Sanchez
LOS ANGELES UNIFIED SCHOOL DISTRICT
DESIGN AND A/E TECHNICAL SUPPORT
FACILITIES SERVICES DIVISION
333 S. BEAUDRY AVENUE, 23DS FLOOR
LOS ANGELES, CALIFORNIA 90017
Tel: (213)241-4254
Fax: (213)241-4199
PROJECT TITLE AND SCHOOL LOCATION
SHERMAN OAKS CENTER FOR ENRICHED STUDIES
18605 ERWIN STREET RESEDA, CALIFORNIA 91335
COMMISSIONED ARCHITECT
CulverGroup Professional Land Surveyors
STATE ARCHITECT
SHEET TITLE
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-5
DATE: 6/09/2016
SHEET 5 OF 10


MATCH LINE SEE SHEET C-3
MATCH LINE SEE SHEET C-5
MATCH LINE SEE SHEET C-7
MATCH LINE SEE SHEET C-9
Carlberg Associates
Tree Inventory Legend
Non-Protected Private Property Trees
Protected Private Property Trees with canopy
NOTE: Trees were not professionaly surveyed; locations are representational only.
Inventory: June 2016
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CONSULTANT
CulverGroup Professional Land Surveyors
14841 Yorba Street, Suite 201
Tustin, California, 92780
(714) 389-7330 Fax (714) 389-7331
STAMPS/SEALS
DIVISION OF THE STATE ARCHITECT
SHEET TITLE
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-6
DATE: 6/09/2016
SHEET 6 OF 10
46
47
48
53
54
55
56
57
58
59
66
90
91
92
93
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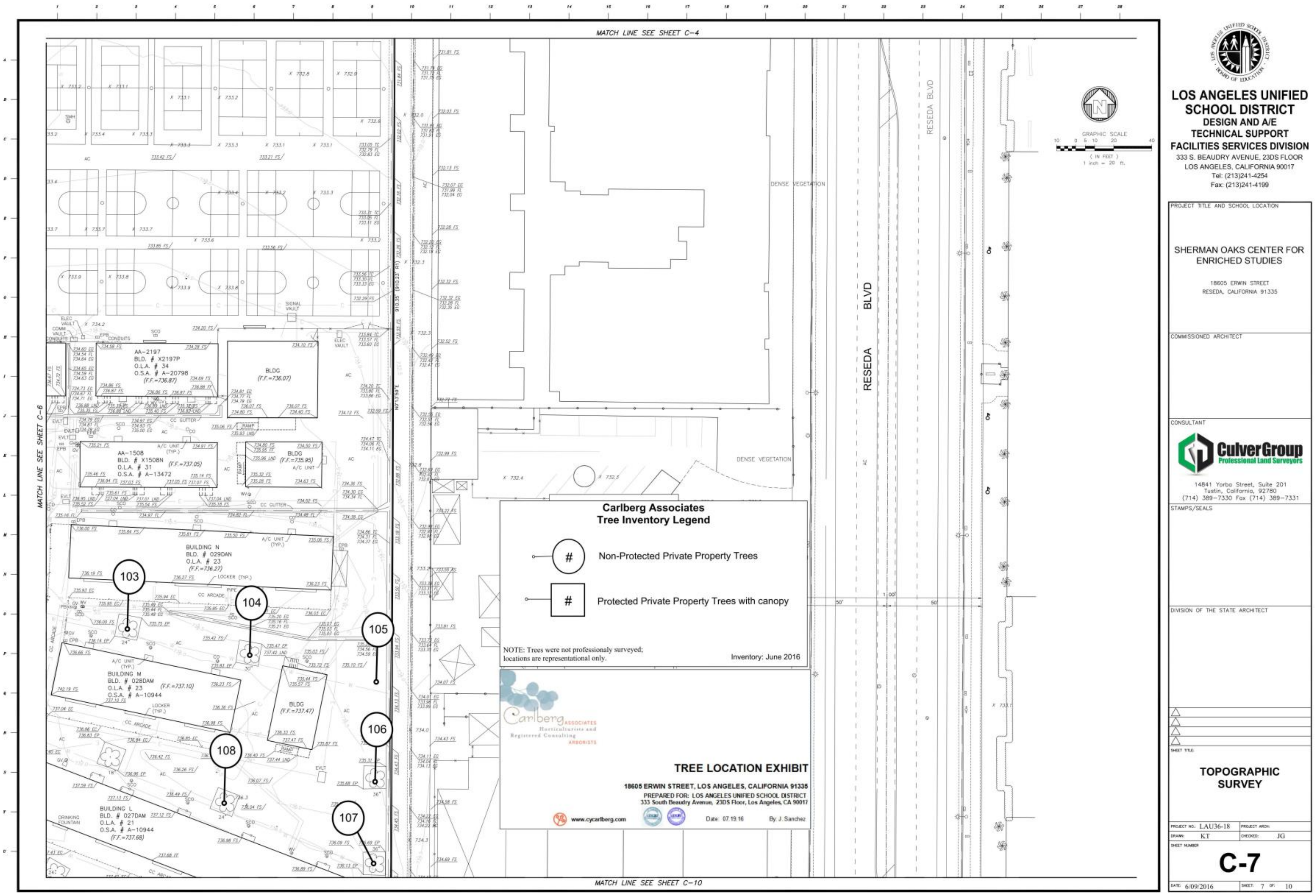
100
101
102
109
110
111
112
113
121
122
123
129
DENSE VEGETATION
TURF
LAWN
CONC
UTILITY BUILDING BLD. # 013DAM O.L.A. # 27 O.S.A. # A-10944 (F.F.=736.60)
PHYSICAL EDUCATION BUILDING BLD. # 016CAM O.L.A. # 24 O.S.A. # A-10944 (F.F.=735.43)
INDUSTRIAL ARTS #2 BLD. # 010DAM O.L.A. # 7 O.S.A. # A-10944 (F.F.=737.28)
BUILDING C BLD. # 019DAM O.L.A. # 10 O.S.A. # A-10944 (F.F.=737.15)
BUILDING B BLD. # 018DAM O.L.A. # 9 O.S.A. # A-10944 (F.F.=738.39)
BUILDING A BLD. # 017DAM O.L.A. # 8 O.S.A. # A-10944 (F.F.=738.58)
BUILDING G BLD. # 023DAM O.L.A. # 17 O.S.A. # A-10944 (F.F.=737.92)
BUILDING F BLD. # 022DAM O.L.A. # 16 O.S.A. # A-10944
BUILDING E BLD. # 021DAM O.L.A. # 15 O.S.A. # A-10944
AA-2742 BLD. # X2742S O.L.A. # 30 O.S.A. # A-35514 (F.F.=737.20)
BLD. # X2198P O.L.A. # 33 O.S.A. # A-20798 (F.F.=736.60)
YADSWORK BLDG 1
WATER FOUNTAIN
DRINKING FOUNTAIN
CC ARCADE
STORAGE
LOCKER (TYP.)
A/C UNIT (TYP.)
CC WALK


MATCH LINE SEE SHEET C-4
MATCH LINE SEE SHEET C-6
MATCH LINE SEE SHEET C-10
RESEDA BLVD
DENSE VEGETATION
AA-2197
BLD. # X2197P
O.L.A. # 34
O.S.A. # A-20798
(F.F.=736.87)
BLDG
(F.F.=736.07)
AA-1508
BLD. # X1508N
O.L.A. # 31
O.S.A. # A-13472
(F.F.=737.05)
BLDG
(F.F.=735.95)
BUILDING N
BLD. # 029DAN
O.L.A. # 23
(F.F.=736.27)
BUILDING M
BLD. # 028DAM
O.L.A. # 23
O.S.A. # A-10944
(F.F.=737.10)
BLDG
(F.F.=737.47)
BUILDING L
BLD. # 027DAM
O.L.A. # 21
O.S.A. # A-10944
(F.F.=737.68)
103
104
105
106
107
108
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
Carlberg Associates
Tree Inventory Legend
Non-Protected Private Property Trees
Protected Private Property Trees with canopy
NOTE: Trees were not professionaly surveyed; locations are representational only.
Inventory: June 2016
Carlberg ASSOCIATES Horticulturists and Registered Consulting ARBORISTS
TREE LOCATION EXHIBIT
18605 ERWIN STREET, LOS ANGELES, CALIFORNIA 91335
PREPARED FOR: LOS ANGELES UNIFIED SCHOOL DISTRICT
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www.cycarlberg.com
Date: 07.19.16
By: J. Sanchez
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CONSULTANT
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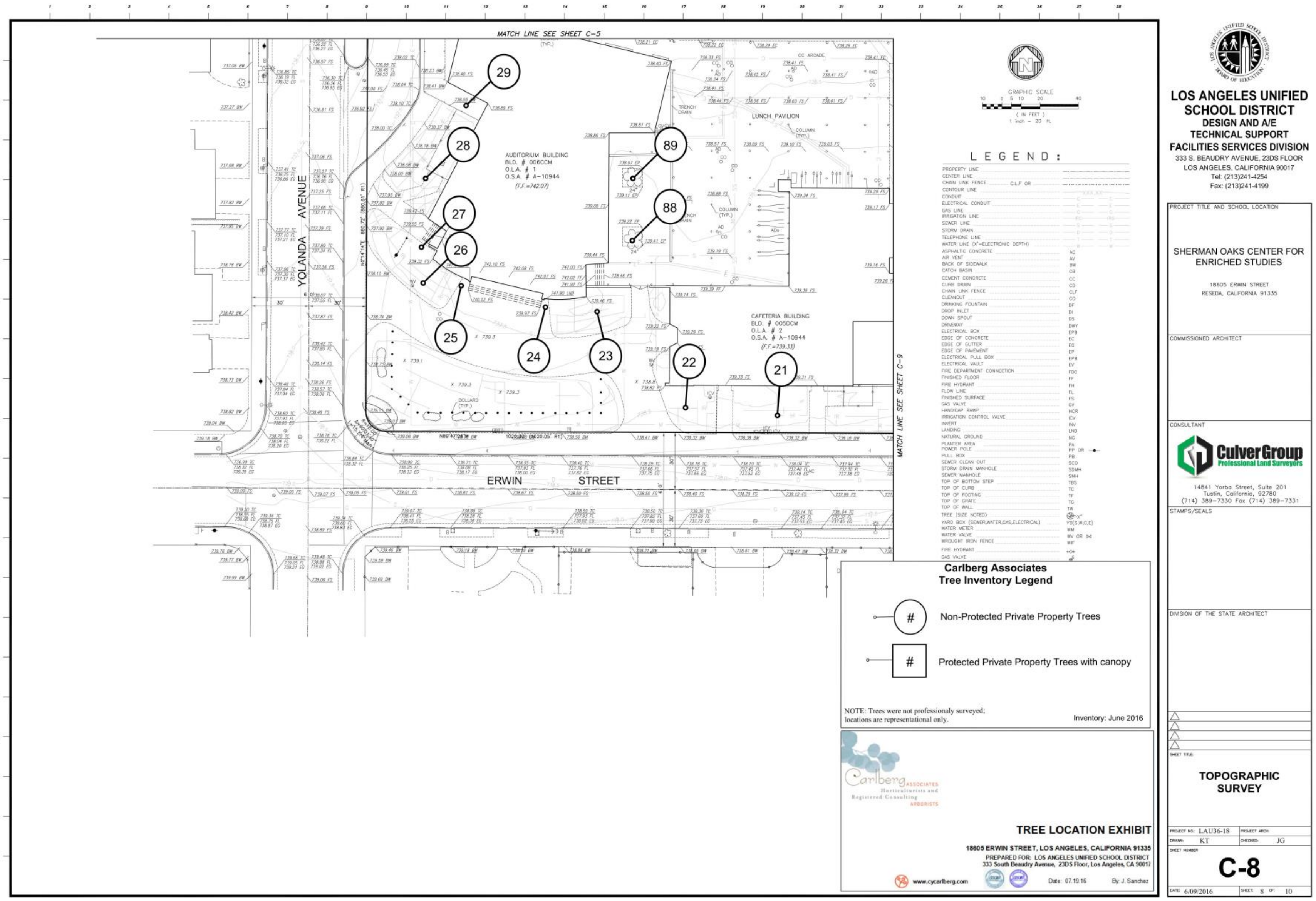
(714) 389-7330 Fax (714) 389-7331
STAMPS/SEALS
DIVISION OF THE STATE ARCHITECT
SHEET TITLE
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-7
DATE: 6/09/2016
SHEET 7 OF 10


MATCH LINE SEE SHEET C-5
MATCH LINE SEE SHEET C-9
YOLANDA AVENUE
ERWIN STREET
AUDITORIUM BUILDING
BLD. # 006CCM
O.L.A. # 1
O.S.A. # A-10944
(F.F.=742.07)
LUNCH PAVILION
CAFETERIA BUILDING
BLD. # 005OCM
O.L.A. # 2
O.S.A. # A-10944
(F.F.=739.33)
29
28
27
26
25
24
23
22
21
89
88
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
LEGEND:
PROPERTY LINE
CENTER LINE
CHAIN LINK FENCE
CONTOUR LINE
CONDUIT
ELECTRICAL CONDUIT
GAS LINE
IRRIGATION LINE
SEWER LINE
STORM DRAIN
TELEPHONE LINE
WATER LINE (X'=ELECTRONIC DEPTH)
ASPHALTIC CONCRETE
AIR VENT
BACK OF SIDEWALK
CATCH BASIN
CEMENT CONCRETE
CURB DRAIN
CHAIN LINK FENCE
CLEANOUT
DRINKING FOUNTAIN
DROP INLET
DOWN SPOUT
DRIVEWAY
ELECTRICAL BOX
EDGE OF CONCRETE
EDGE OF GUTTER
EDGE OF PAVEMENT
ELECTRICAL PULL BOX
ELECTRICAL VAULT
FIRE DEPARTMENT CONNECTION
FINISHED FLOOR
FIRE HYDRANT
FLOW LINE
FINISHED SURFACE
GAS VALVE
HANDICAP RAMP
IRRIGATION CONTROL VALVE
INVERT
LANDING
NATURAL GROUND
PLANTER AREA
POWER POLE
PULL BOX
SEWER CLEAN OUT
STORM DRAIN MANHOLE
SEWER MANHOLE
TOP OF BOTTOM STEP
TOP OF CURB
TOP OF FOOTING
TOP OF GRATE
TOP OF WALL
TREE (SIZE NOTED)
YARD BOX (SEWER,WATER,GAS,ELECTRICAL)
WATER METER
WATER VALVE
WROUGHT IRON FENCE
FIRE HYDRANT
GAS VALVE
Carlberg Associates
Tree Inventory Legend
Non-Protected Private Property Trees
Protected Private Property Trees with canopy
NOTE: Trees were not professionaly surveyed; locations are representational only.
Inventory: June 2016
Carlberg ASSOCIATES Horticulturists and Registered Consulting ARBORISTS
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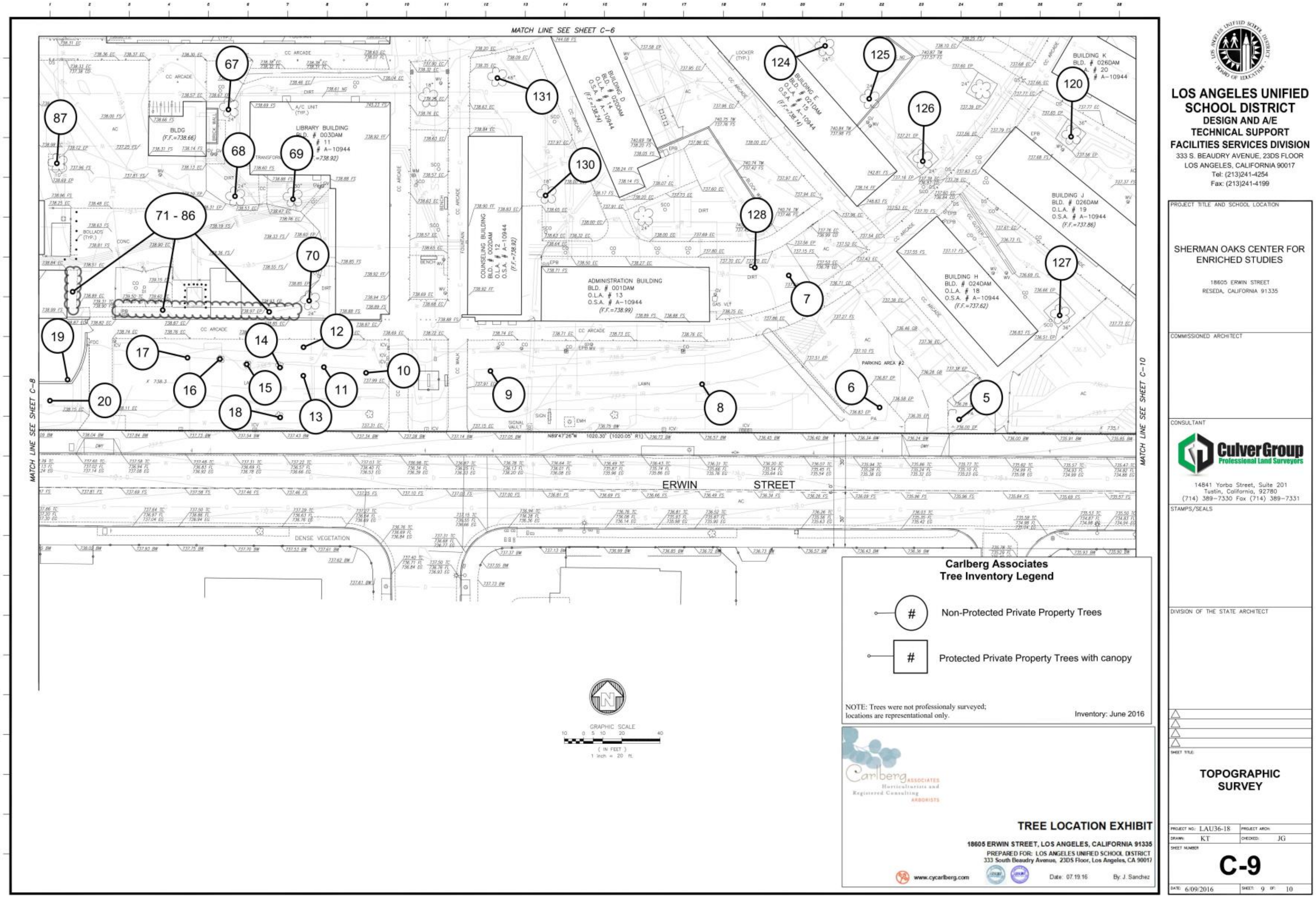
(714) 389-7330 Fax (714) 389-7331
STAMPS/SEALS
DIVISION OF THE STATE ARCHITECT
SHEET TITLE:
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
PROJECT ARCH:
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-8
DATE: 6/09/2016
SHEET: 8 OF: 10


MATCH LINE SEE SHEET C-6
MATCH LINE SEE SHEET C-8
MATCH LINE SEE SHEET C-10
LIBRARY BUILDING
BLD. # 003DAM
O.L.A. # 11
O.S.A. # A-10944
COUNSELING BUILDING
BLD. # 002DAM
O.L.A. # 12
O.S.A. # A-10944
ADMINISTRATION BUILDING
BLD. # 001DAM
O.L.A. # 13
O.S.A. # A-10944
BUILDING D
BUILDING E
BUILDING H
BLD. # 024DAM
O.L.A. # 18
O.S.A. # A-10944
BUILDING J
BLD. # 026DAM
O.L.A. # 19
O.S.A. # A-10944
BUILDING K
BLD. # 026DAM
O.L.A. # 20
O.S.A. # A-10944
CC ARCADE
PARKING AREA
LAWN
DENSE VEGETATION
ERWIN STREET
87
67
68
69
70
71 - 86
131
130
124
125
126
120
128
127
7
19
17
14
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6
5
20
16
15
11
18
13
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
Carlberg Associates
Tree Inventory Legend
#
Non-Protected Private Property Trees
#
Protected Private Property Trees with canopy
NOTE: Trees were not professionaly surveyed; locations are representational only.
Inventory: June 2016
Carlberg ASSOCIATES
Horticulturists and Registered Consulting ARBORISTS
TREE LOCATION EXHIBIT
18605 ERWIN STREET, LOS ANGELES, CALIFORNIA 91335
PREPARED FOR: LOS ANGELES UNIFIED SCHOOL DISTRICT
333 South Beaudry Avenue, 23DS Floor, Los Angeles, CA 90017
www.cycarlberg.com
Date: 07.19.16
By: J. Sanchez
LOS ANGELES UNIFIED SCHOOL DISTRICT
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FACILITIES SERVICES DIVISION
333 S. BEAUDRY AVENUE, 23DS FLOOR
LOS ANGELES, CALIFORNIA 90017
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Fax: (213)241-4199
PROJECT TITLE AND SCHOOL LOCATION
SHERMAN OAKS CENTER FOR ENRICHED STUDIES
18605 ERWIN STREET
RESEDA, CALIFORNIA 91335
COMMISSIONED ARCHITECT
CONSULTANT
CulverGroup
Professional Land Surveyors
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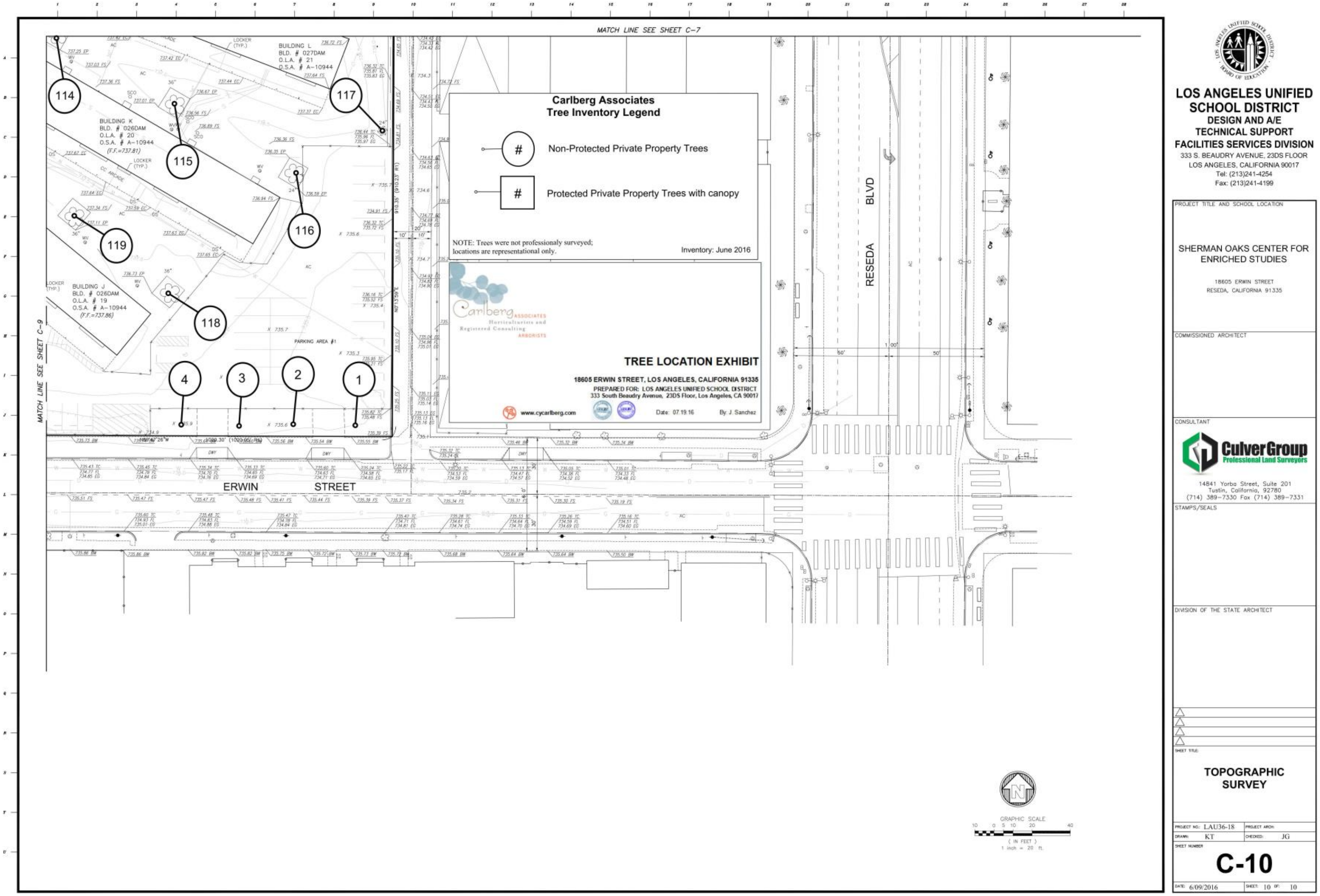
(714) 389-7330 Fax (714) 389-7331
STAMPS/SEALS
DIVISION OF THE STATE ARCHITECT
SHEET TITLE
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
PROJECT ARCH:
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-9
DATE: 6/09/2016
SHEET: 9 OF: 10


MATCH LINE SEE SHEET C-7
MATCH LINE SEE SHEET C-9
Carlberg Associates
Tree Inventory Legend
Non-Protected Private Property Trees
Protected Private Property Trees with canopy
NOTE: Trees were not professionaly surveyed; locations are representational only.
Inventory: June 2016
Carlberg ASSOCIATES Horticulturists and Registered Consulting ARBORISTS
TREE LOCATION EXHIBIT
18605 ERWIN STREET, LOS ANGELES, CALIFORNIA 91335
PREPARED FOR: LOS ANGELES UNIFIED SCHOOL DISTRICT
333 South Beaudry Avenue, 23DS Floor, Los Angeles, CA 90017
www.cycarlberg.com
Date: 07.19.16
By: J. Sanchez
114
115
116
117
118
119
1
2
3
4
BUILDING L
BUILDING K
BUILDING J
PARKING AREA #1
ERWIN
STREET
RESEDA
BLVD
LOS ANGELES UNIFIED SCHOOL DISTRICT
DESIGN AND A/E
TECHNICAL SUPPORT
FACILITIES SERVICES DIVISION
333 S. BEAUDRY AVENUE, 23DS FLOOR
LOS ANGELES, CALIFORNIA 90017
Tel: (213)241-4254
Fax: (213)241-4199
PROJECT TITLE AND SCHOOL LOCATION
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RESEDA, CALIFORNIA 91335
COMMISSIONED ARCHITECT
CONSULTANT
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Professional Land Surveyors
14841 Yorba Street, Suite 201
Tustin, California, 92780
(714) 389-7330 Fax (714) 389-7331
STAMPS/SEALS
DIVISION OF THE STATE ARCHITECT
SHEET TITLE:
TOPOGRAPHIC SURVEY
PROJECT NO: LAU36-18
PROJECT ARCH:
DRAWN: KT
CHECKED: JG
SHEET NUMBER
C-10
DATE: 6/09/2016
SHEET: 10 OF: 10
GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

EXHIBIT D – REDUCED COPY OF SITE PLAN – SCHEME 2A

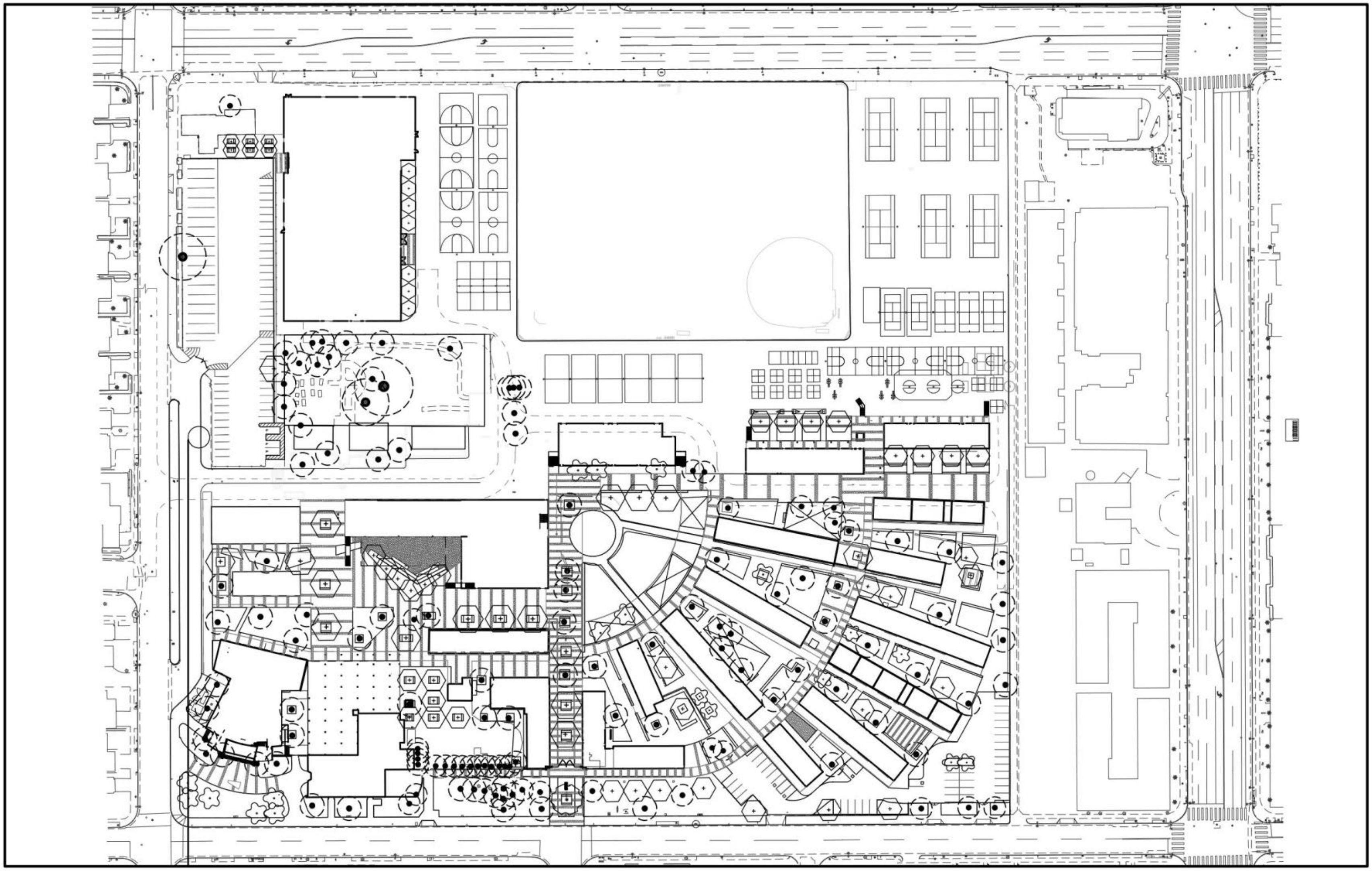


EXHIBIT E – CAPTIONED TREE PHOTOGRAPHS

Tree #1

Tree #2

Tree #3

Tree #4

Tree #5

Tree #6

Tree #7

Tree #8


Tree #9


Tree #10


Tree #11


Tree #12


Tree #13


Tree #14


Tree #15


Tree #16


Tree #17


Tree #18


Tree #19


Tree #20

Tree #21

Tree #22

Tree #23

Tree #24


Tree #25


Tree #26


Tree #27


Tree #28


Tree #29


Tree #30


Tree #31


Tree #32


Tree #33


Tree #34


Tree #35


Tree #36


Tree #37


Tree #38


Tree #39


Tree #40


Tree #41


Tree #42


Tree #43


Tree #44

Tree #45

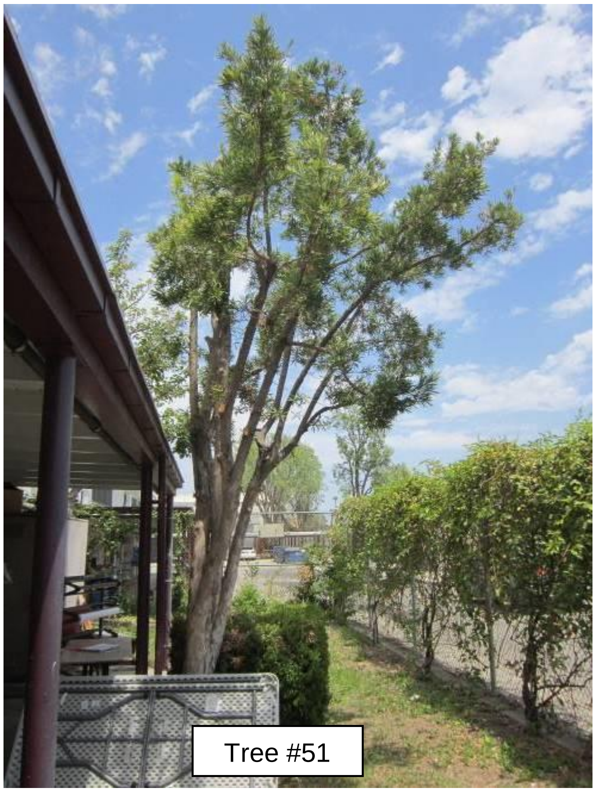
Tree #46

Tree #47

Tree #48

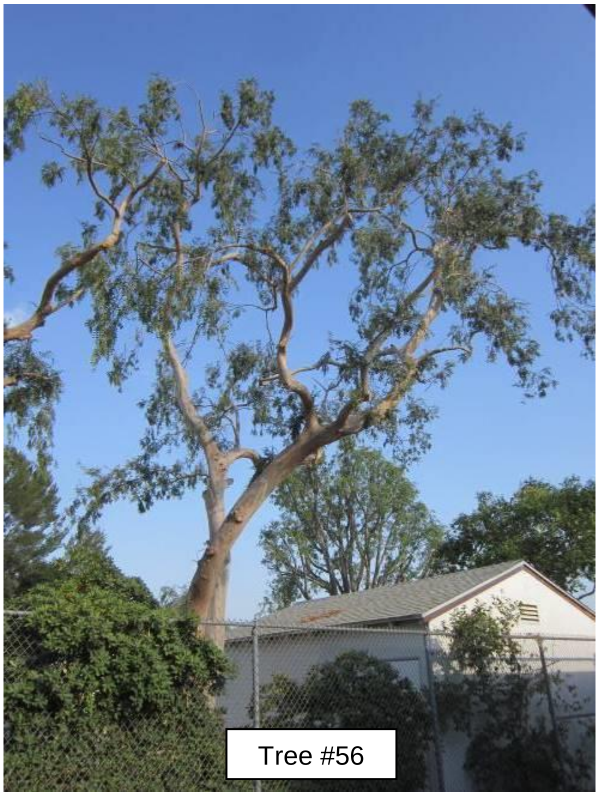

Tree #49


Tree #50


Tree #51


Tree #52


Tree #53(L) - #54(C) - #55(R)


Tree #56


Tree #57


Tree #58

Tree #59

Tree #60

Tree #61

Tree #62

Tree #63

Tree #64

Tree #65

Tree #66

Tree #67

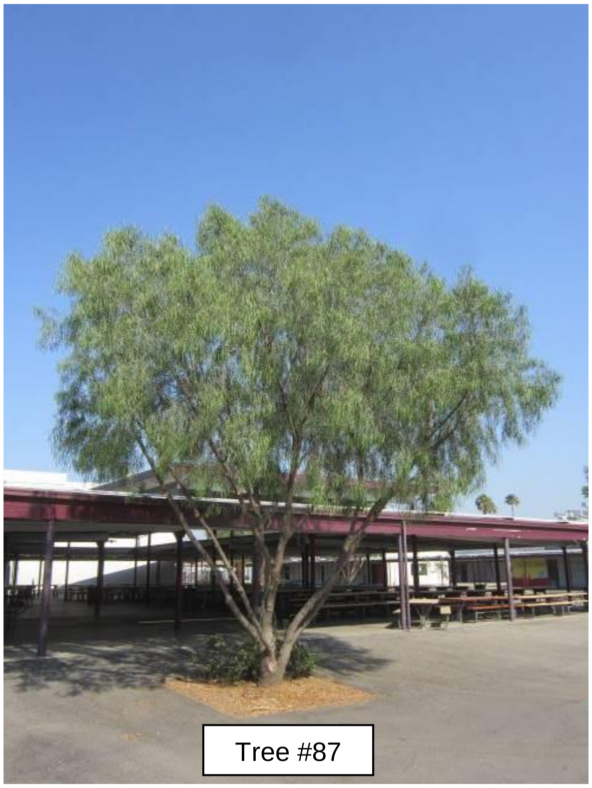
Tree #68

Tree #69

Tree #70

Tree #71 through #82 (left to right)

Tree #83 through #86 (left to right)



Tree #87


Tree #88


Tree #89


Tree #90


Tree #91


Tree #92


Tree #93


Tree #94(L) - #95(R)


Tree #96(L) - #97(R)


Tree #98


Tree #99


Tree #100


Tree #101


Tree #102


Tree #103


Tree #104


Tree #105

Tree #106

Tree #107

Tree #108

Tree #109

Tree #110

Tree #111

Tree #112

Tree #113


Tree #114


Tree #115


Tree #116


Tree #117

Tree #118

Tree #119

Tree #120

Tree #121

Tree #122

Tree #123

Tree #124

Tree #125


Tree #126


Tree #127


Tree #128


Tree #129

Tree #130

Tree #131

CY CARLBERG
CARLBERG ASSOCIATES
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Education	B.S., Landscape Architecture, California State Polytechnic University, Pomona, 1985 Graduate, Arboricultural Consulting Academy, American Society of Consulting Arborists, Chicago, Illinois, 2002 Graduate, Municipal Forestry Institute, Lied, Nebraska, 2012
Experience	Consulting Arborist, Carlberg Associates, 1998-present Manager of Grounds Services, California Institute of Technology, Pasadena, 1992-1998 Director of Grounds, Scripps College, Claremont, 1988-1992
Certificates	Certified Arborist (#WE-0575A), International Society of Arboriculture, 1990 Registered Consulting Arborist (#405), American Society of Consulting Arborists, 2002 Certified Urban Forester (#013), California Urban Forests Council, 2004 Certified Tree Risk Assessor (#1028), International Society of Arboriculture, 2011

Areas of Expertise

Ms. Carlberg is experienced in the following areas of tree management and preservation:

- Tree health and risk assessment
- Master Planning
- Tree inventories and reports to satisfy jurisdictional requirements
- Expert Testimony
- Post-fire assessment, valuation, and mitigation for trees and native plant communities
- Value assessments for native and non-native trees
- Pest and disease identification
- Guidelines for oak preservation
- Selection of appropriate tree species
- Planting, pruning, and maintenance specifications
- Tree and landscape resource mapping – GPS, GIS, and AutoCAD
- Planning Commission, City Council, and community meetings representation

Previous Consulting Experience

Ms. Carlberg has overseen residential and commercial construction projects to prevent damage to protected and specimen trees. She has thirty-five years of experience in arboriculture and horticulture and has performed tree health evaluation, value and risk assessment, and expert testimony for private clients, government agencies, cities, school districts, and colleges. Representative clients include:

The Huntington Library and Botanical Gardens
The Los Angeles Zoo and Botanical Gardens
The Rose Bowl and Brookside Golf Course, Pasadena
Walt Disney Concert Hall and Gardens
The Art Center College of Design, Pasadena
Pepperdine University
Loyola Marymount University
The Claremont Colleges (Pomona, Scripps, CMC, Harvey Mudd, Claremont Graduate University, Pitzer, Claremont University Center)
Quinn, Emanuel, Urquhart and Sullivan (attorneys at law)
The City of Claremont
The City of Beverly Hills
The City of Pasadena
The City of Los Angeles
The City of Santa Monica
Santa Monica/Malibu Unified School District
San Diego Gas & Electric
Los Angeles Department of Water and Power
Rancho Santa Ana Botanic Garden, Claremont
Latham & Watkins, LLP (attorneys at law)

Affiliations

Ms. Carlberg serves with the following national, state, and community professional organizations:

- California Urban Forests Council, Board Member, 1995-2006
- Street Tree Seminar, Past President, 2000-present
- American Society of Consulting Arborists Academy, Faculty Member, 2003-2005, 2014
- American Society of Consulting Arborists, Board of Directors, 2013-Present
- Member, Los Angeles Oak Woodland Habitat Conservation Strategic Alliance, 2010-present

SCOTT MCALLASTER

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Education	B.A., Environmental Studies, University of California, Santa Barbara, 2000
Experience	Project Planner & Senior Arborist, Land Design Consultants, Inc. Pasadena, 1999 – 2014
Certificates	Certified Arborist, WE-7011A, International Society of Arboriculture, 2004 Qualified Tree Risk Assessor, International Society of Arboriculture, 2015

AREAS OF EXPERTISE

Mr. McAllaster is experienced in the following areas of tree management and preservation:

- Tree health & risk assessments
- Inventories & reports for native and non-native trees
- Master planning
- Evaluation of trees for preservation, encroachment, relocation, restoration, and hazards
- Construction monitoring and reporting
- Value assessments (appraisals) for native and non-native trees
- Post-fire inventories, assessments, and valuations for native and non-native trees
- Guidelines for tree preservation, planting, pruning and maintenance specifications
- Tree and landscape resource mapping – GPS, GIS, and AutoCAD
- Planning Commission, City Council, and community meetings representation
- Review of landscape plans for mitigation compliance & fire fuel modification planning
- Performance of long-term mitigation compliance monitoring & reporting

PREVIOUS CONSULTING EXPERIENCE

Mr. McAllaster has performed hundreds of tree inventories, health evaluations, impact analyses, hazard, and value assessments for counties, cities, sanitation districts, and water districts, as well as private developers, architects, engineers, and homeowners. He has over 11 years of experience in arboriculture and is trained in environmental planning, state and federal regulatory permitting, preparation of CEQA analyses, and habitat mitigation planning and implementation. Representative clients include:

City of Pasadena
City of Santa Clarita
City of Glendora
Los Angeles County Fire Department
Los Angeles County Sanitation Districts
Newhall County Water District
Pulte/Centex Homes
Newhall Land and Farming
E & S Ring, Inc.
Hollywood Forever Cemetery
Archdiocese of Los Angeles
St. John’s Hospital, Santa Monica
Kovac Architects
Tim Barber, Ltd., Architects
Ojai Valley Community Hospital
The Kibo Group
El Monte Garden Senior Center
IMT Capital, LLC
San Diego Gas & Electric
Corky McMillin Companies
City of South Gate
City of Arcadia
D2 Development
Burrtec, Inc.
The Claremont Colleges
The New Home Company
William Carey University
Claremont Golf Course
Universal Hilton
Gensler Architects
Marmol Radziner, Architects
NAC Architecture
Aurora/Signature Health Services
Monte Vista Grove Homes
Highpointe Communities
Claremont University Center

AFFILIATIONS

Mr. McAllaster serves with the following national and regional professional organizations:

- Member, International Society of Arboriculture, Western Chapter
- Member, Street Tree Seminar, Inc.

Appendix C.
Geologic Evaluation

GEOTECHNICAL EVALUATION
TO ASSIST DESIGN TEAM SCHEMATIC DEVELOPMENT, SHERMAN OAKS CENTER FOR ENRICHED STUDIES, 18605 ERWIN STREET, TARZANA, CALIFORNIA

Prepared for:

Los Angeles Unified School District
333 S Beaudry Avenue, 22nd Floor
Los Angeles, California 90017

Work Order: 2880-29-2-100
October 21, 2016

GORIAN
& ASSOCIATES, INC.

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Attachments: Appendix A: Logs of Subsurface Data
Appendix B: Laboratory Test Results
Appendix C: Seismically Induced Settlement Analyses
Appendix D: Infiltration Testing Report
Plate 1: Geotechnical Exploration Map
Plate 2: Geotechnical Cross Sections

GORIAN
& ASSOCIATES, INC.

Applied Earth Sciences
Geotechnical Engineers
Engineering Geologists
DSA Accepted Testing Laboratory
Special Inspection and Materials Testing

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Thousand Oaks
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805 375-9263 fax

October 21, 2016

Los Angeles Unified School District
333 S Beaudry Avenue, 22nd Floor
Los Angeles, California 90017

Work Order: 2880-29-2-100

Attention: Peyman Soroosh Moghadam

Subject: **Geotechnical Evaluation to Assist Design Team Schematic Development, Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, Los Angeles County, California**

1.0 INTRODUCTION

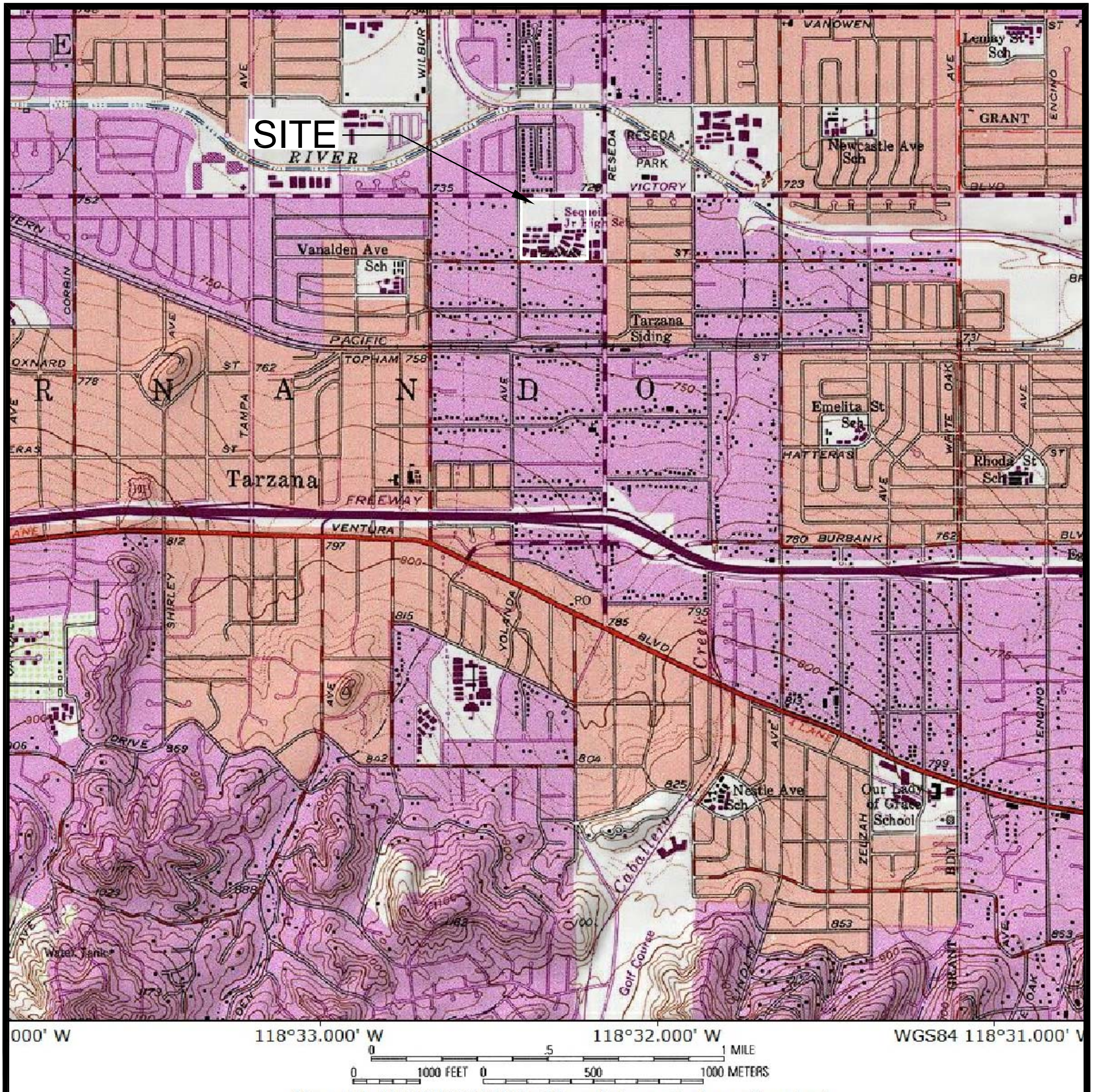
Presented herein are the results of our geotechnical site evaluation to assist the design team schematic development at Sherman Oaks Center for Enriched Studies Magnet School (SOCES). The existing school is at 18605 Erwin Street in the Tarzana area of the City of Los Angeles, California as shown on Figure 1.

Los Angeles Unified School District (LAUSD) personnel identified thirteen subsurface exploration locations to be evaluated for this study. Previous exploration, presented herein included two hollow-stem auger borings and two cone penetrometer test (CPT) soundings. The approximate locations of our exploratory points are shown on the attached Geotechnical Exploration Map, Plate 1.

Our preliminary geotechnical recommendations for the project design and construction are based on our scope of services performed for this site evaluation that included archival research, field exploration, and laboratory testing, as well as geotechnical analyses as discussed herein. Providing recommendations presented herein are followed during design and construction, the site is considered to be suitable from a geotechnical engineering standpoint for the proposed school modernization project. Additional geotechnical site evaluation may be necessary when the final building location plans are available for the modernization project. The scope of services for this report did not include a geotechnical evaluation of the existing structures.

2.0 PROJECT CONSIDERATIONS

The existing school (hereafter, Site) is underlain by shallow groundwater as shown on groundwater maps which show historical high groundwater levels at roughly 10 feet below the site (CGS, 1998-rev. 2005). In addition, the Site is within a State of California designated Liquefaction Seismic Hazard Zone. To evaluate the potential for seismic settlement, select borings were drilled to a depth of 50 feet; however, the CPT soundings encountered refusal at depths of 34 and 42 feet. During our subsurface exploration groundwater was encountered at a depth of approximately 30 feet below the existing ground surface.



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

VICINITY MAP

SOCES
18605 Erwin Street
Reseda, California

GORIAN & ASSOCIATES, INC.
APPLIED EARTH SCIENCES

Work Order: 2880-29-2-100	Date: October 2016
Scale:1"= 2000'	Drawn by: Approved by:
	Figure 1

Source:
USGS Topographic Maps, Canoga Park Quadrangle, Los Angeles County

3.0 SCOPE OF SERVICES

Gorian and Associates, Inc. conducted this geotechnical evaluation to assist the Design Team Schematic Development with the improvement project(s) at the current SOCES (formerly Sequoia Jr. High School) site under the supervision of a State registered geotechnical engineer and certified engineering geologist. Our evaluation of the site included:

3.1 ARCHIVAL REVIEW

Pertinent geotechnical data available in our office was reviewed.

3.2 SUBSURFACE EXPLORATION

Thirteen geotechnical borings were recently drilled to depths of approximately 26 to 51½ feet below the existing ground surface (bgs) to evaluate the underlying soil conditions. A subcontractor supplied and operated truck-mounted hollow-stem auger drill rig or a limited access hollow-stem auger drill rig were used to advance all borings to the indicated depths. Field exploration activities described above were observed by a geologist from this office, who logged the underlying materials and obtain bulk and relatively undisturbed drive soil samples for laboratory analyses. Standard Penetration Testing (SPT) of the encountered in-situ earth materials was performed at various depths within the exploratory borings. The SPT sampler without a liner was driven using a hammer weighing 140 pounds with a 30-inch drop.

Previous exploration at the site included two hollow-stem borings drilled to depths of approximately 51½ feet bgs and two Cone Penetrometer Test (CPT) Soundings advanced to depths of 35 and 43 feet bgs utilizing a subcontractor supplied and operated limited access cone penetrometer test rig.

The points of exploration were marked in the field and a utility locator subcontractor was contacted to identify the surface trace of detectable underground utilities and abandoned piping in an effort to explore away from subsurface utilities. Additionally, Underground Service Alert (USA) was contacted per State mandated protocol prior to excavation on the site.

At the end of drilling, the borings were backfilled with the excavated material and patched with asphalt cold patch, where appropriate and the CPT soundings were filled with bentonite. Boring and CPT backfills may settle with time and a LAUSD representative should fill any depressions that may occur, as necessary.

3.3 LABORATORY TESTING

A program of geotechnical laboratory testing was performed to evaluate properties of selected soil samples obtained during the subsurface exploration. The following tests were conducted for this geotechnical evaluation:

- In-situ moisture content and dry density
- Maximum density and optimum moisture content relationships
- Direct Shear Testing
- Consolidation Testing
- Expansion Index Testing
- Hydrometer Analyses
- Corrosion Testing
- R-Value Testing

3.4 GEOTECHNICAL ENGINEERING ANALYSIS AND REPORT PREPARATION

This report was prepared to present the results of our archival research, field subsurface exploration and laboratory testing programs, and engineering analyses including the findings and conclusions of our geotechnical site evaluation. The report includes:

a) A description of subsurface conditions as encountered in the exploratory excavations, including Logs of Subsurface Data (Appendix A) and a Geotechnical Exploration Map (Plate 1).

b) A description of the laboratory testing program, including tests results (Appendix B).

c) Discussion and recommendations regarding:

   i) Geologic hazards including seismic setting of the site and faulting;

   ii) Seismic design criteria for new and retrofit;

   iii) Liquefaction and seismically induced settlement;

   iv) Preliminary foundation design recommendations (shallow and deep) including estimated settlements;

   v) Retaining wall design parameters, including earthquake loading;

   vi) Preliminary pavement design recommendations;

   vii) Preliminary shoring recommendations;

   viii) Soil chemistry analysis, by subcontract; and

   ix) Practicality of infiltration of stormwater (Appendix D).

4.0 SITE DESCRIPTION

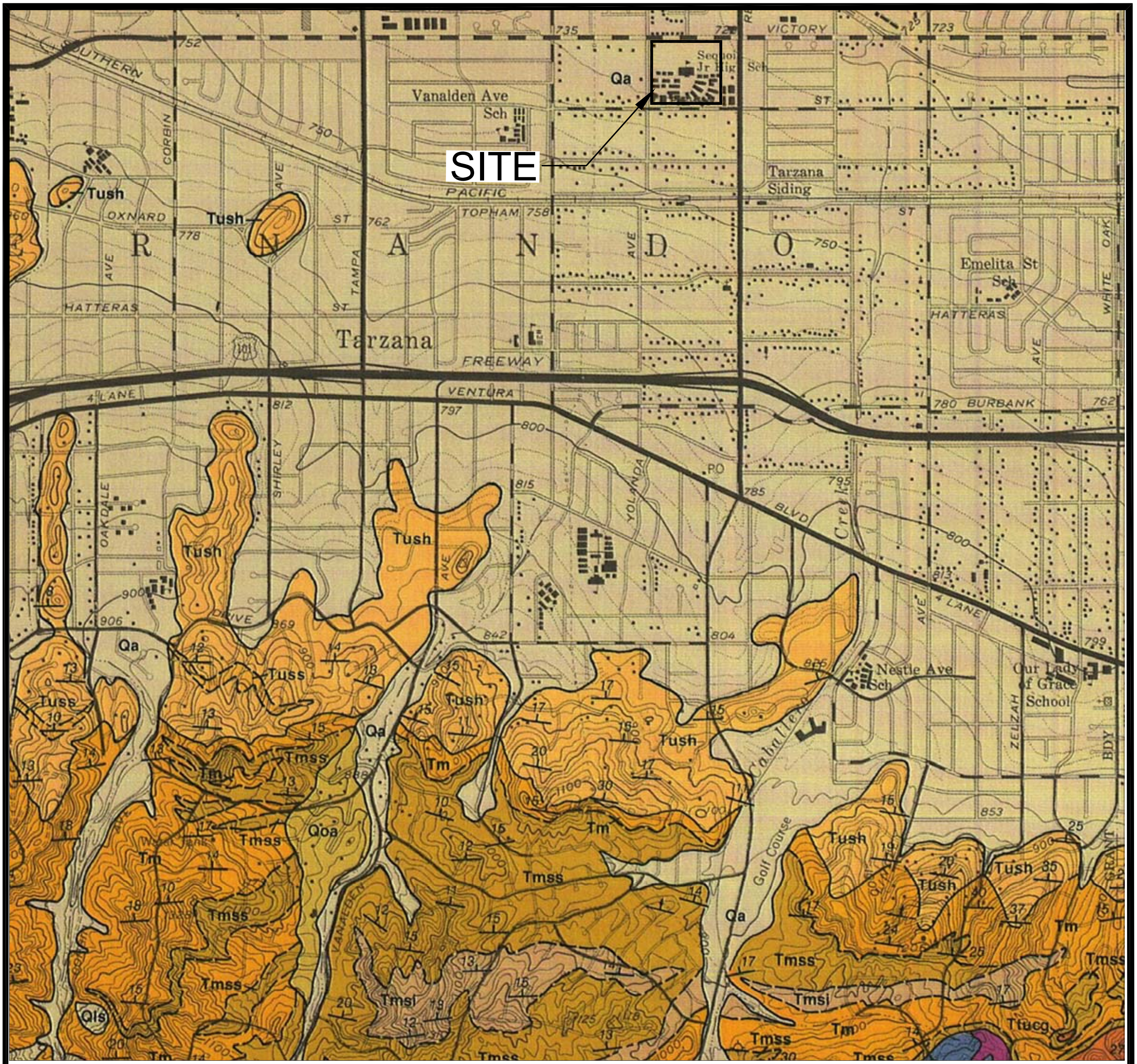
The Site is on a relatively flat rectangular parcel bounded on the south by Erwin Street, the north by Victory Boulevard, the west by Yolanda Avenue, and the east by an alley separating the site from the adjacent commercial buildings fronting Reseda Boulevard (see Figure 1). Onsite, the existing buildings are generally on the southern half of the campus with the northern portion consisting of asphalt covered playground and grass fields. Grass and landscaping are present in the front of the school along Erwin and scattered between the buildings.

5.0 REGIONAL GEOLOGIC SETTING

The Site is in the southwestern portion of the San Fernando Valley, an east trending structural trough within the Transverse Ranges geomorphic province of Southern California. This geomorphic province is dominated by active compressional tectonics (crustal shortening) and is characterized by east west tending ranges and ridges with intervening canyons and valleys. The San Fernando Valley has been filled from the sides with sediments from drainages of the San Gabriel Mountains (mainly) and Santa Susana Mountains to the north, the Santa Monica Mountains to the south, and the Simi Hills and Verdugo Mountains to the west and east, respectively. Being on the southwest portion of the Valley, the Site is on a broad alluvial fan apron deposited at the mouths of drainages of the Santa Monica Mountains approximately 2 miles south of the site (see Figure 2).

6.0 SITE GEOLOGY

The Site is underlain by soils referred to as alluvial fan deposits. Based on surficial observations and the subsurface exploration points these alluvial soils are locally mantled with pavements and possibly localized areas of alluvial derived fill soils associated with existing construction.



Explanation

Qa - surficial sediments, alluvial gravel sand and clay of valley areas

Tush - unnamed shale, light gray claystone and siltstone, vaguely bedded, crumbly where weathered

Source

Dibblee, Thomas W. Jr., & Ehrenspeck, Helmut E., 1992.
Geologic Map of the Topanga and Canoga Park (South ½)
Quadrangles, Los Angeles County, California.
Dibblee Geological Foundation Map # 35

C-8

REGIONAL GEOLOGIC MAP

SOCES
18605 Erwin Street
Reseda, California

GORIAN & ASSOCIATES, INC.
APPLIED EARTH SCIENCES

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Scale:1"= 2000'	Drawn by: Approved by:	Figure 2

6.1 SUBSURFACE CONDITIONS

6.1.1 Pavement

The pavement section in the drive area (B-1) is 4½ inches of asphaltic concrete overlying native soils. On the playground the pavement section varied from approximately 2 to 2½ inches of asphaltic concrete over 2½ to 4 inches of aggregate base. Between buildings the pavement sections varied from 2 to 4 inches of asphaltic concrete overlying 3½ to 6 inches of aggregate base.

6.1.2 Fill

Fill soils were encountered in borings B-2, B-107, B-108 and B-110. The fill varied in thickness from 2½ to 5½ feet and consisted of brown silty clay. The clay fill soil varied from damp to wet and very stiff to hard.

6.1.3 Alluvium

The late Holocene Alluvial Fan soil profile generally consisted of sandy and silty clays near the surface, underlain by thickly interbedded silty and clayey sands, silty clays, clayey silts and clean sand. However, clean sands were not encountered in the southwest corner of the site. The soils were damp to moist above 30 feet and became moist to saturated below 30 feet. The alluvial soils varied in consistency from medium dense to dense where sandy with the cohesive, clayey alluvial soils being medium stiff to very stiff. Geotechnical Cross Sections are presented on Plate 2.

6.2 GROUNDWATER

Groundwater was encountered at depths varying from 28 feet bgs (B-101) to 37 feet bgs (B-112). As previously mentioned, historical high groundwater is on the order of 10 feet below grade (CGS, 1998 rev. 2005).

6.3 LANDSLIDES

No landslides are present within or near the site nor are any shown on regional geologic maps.

6.4 FLOOD HAZARD ZONE

The proposed site is not in a Federal Emergency Management Agency (FEMA) mapped flood hazard zone (FEMA FIRM Map, 2008). The site is also not in a dam or tsunami inundation zone (City of Los Angeles Dept. of City Planning, 1996).

6.5 FAULTING AND SEISMICITY

The Site, like other sites in the San Fernando Valley, is in a seismically active region prone to occasional damaging earthquakes. The destructive power of earthquakes can be grouped into fault-rupture, ground shaking (strong motion), and secondary effects of ground shaking (such as tsunami, liquefaction, settlement, landslides). The hazard of fault-rupture is generally thought to be associated with a relatively narrow zone along well-defined pre-existing active or potentially active faults. No doubt there is and will be exceptions to this, because it is not possible to predict the precise location of a new fault where none existed before (CDMG, 1975).

No active faults are known to cross the site. The Site is not currently within an Alquist-Priolo Earthquake Fault Zone as defined by the State Geologist (Bryant and Hart, 2007).

The closest historically active surface fault is the San Fernando fault, which ruptured February 9, 1971 and is approximately 8 miles to the northeast of the site. The active Hollywood fault, part of the Santa Monica-Hollywood-Raymond fault system lies approximately 11 miles southeast of the site and the active Verdugo fault is approximately 13½ miles east of the site (see Figure 3). The potential for ground rupture on site due to faulting during the life expectancy of the project is considered remote.

Although no potentially active or active faults are known to exist within the site, the area will be subject to strong ground motion from occasional earthquakes in the region. Four significant earthquakes have occurred centered within 40 miles of the site within the last eight decades; the March 11, 1933 Long Beach earthquake (6.4 magnitude), the February 9, 1971 San Fernando earthquake (6.6 magnitude), the October 1, 1987 Whittier Narrows earthquake (6.0 magnitude) and the January 17, 1994 Northridge earthquake (6.7 magnitude).

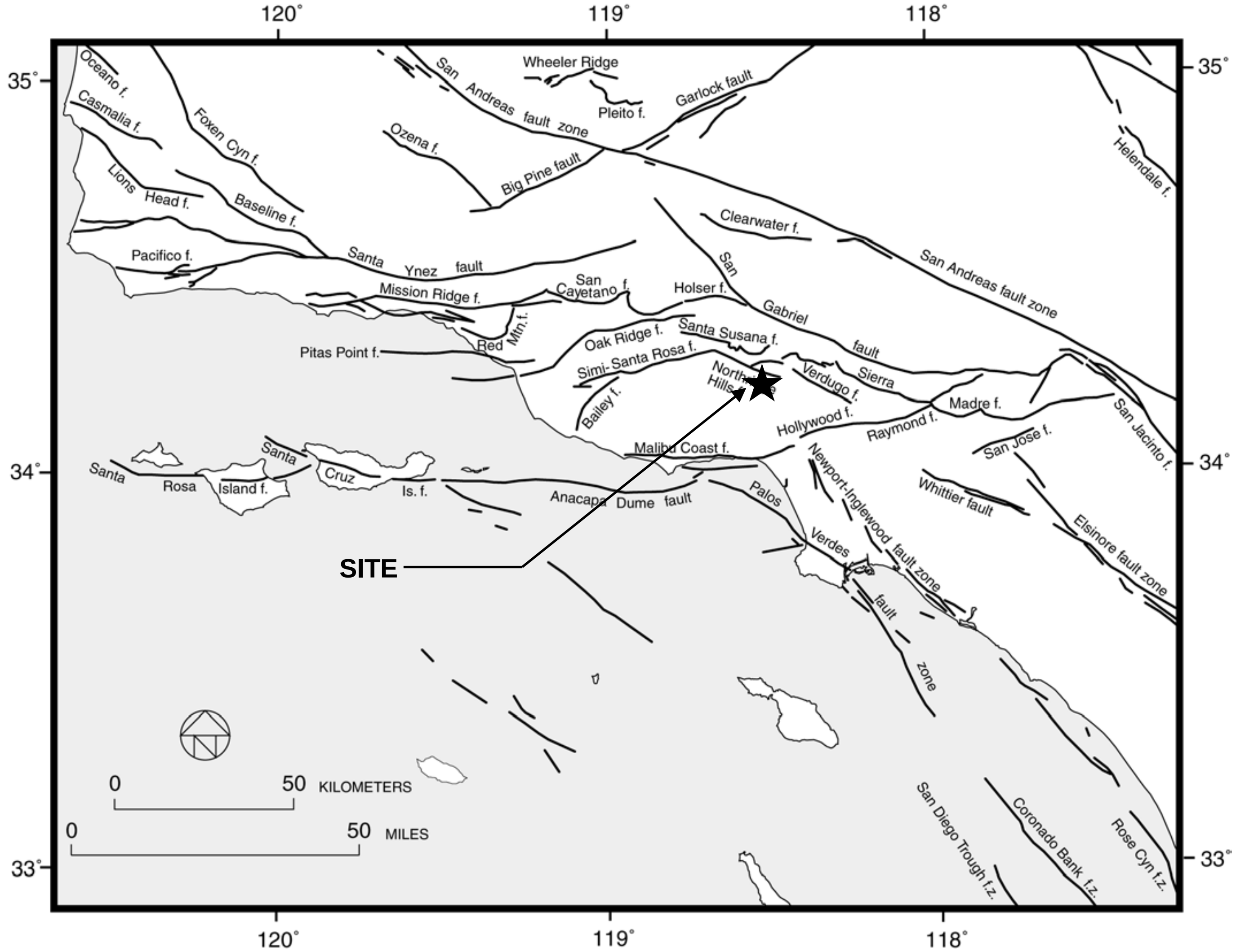


Figure 3 - Regional Fault Map. Approximate Location of Site indicated with star.

It is estimated for the Northridge event, the subject area experienced maximum horizontal accelerations on the order of 0.4g for the alluvial site, based upon ground motion data obtained from ground motion contours presented in Chapter 3 of the *Preliminary Report on the Principal Geotechnical Aspects of the January 17, 1994 Northridge Earthquake* (Chang et al., 1994). Significant earthquakes will likely occur in this area within the life expectancy of the project and the site will experience strong ground shaking from these events.

Based on the latest U.S. Geological Survey (USGS) interactive web application, *2008 Interactive Deaggregations* <http://geohazards.usgs.gov/deaggint/2008/> probabilistic seismic hazard analyses (PSHA) predict the Design Basis Earthquake (475 year return period) peak horizontal ground acceleration will be on the order of 0.46g for the alluvial soil conditions of the Site (assumed V_S=275m/sec). The mean magnitude from this PSHA is 6.75(Mw) with a mean distance of 18.7 km from the property. Utilizing a 2% probability of exceedance in 50 years (2,475 year return period) the peak ground acceleration is estimated to be 0.72g based on a seismic event with a mean magnitude of 6.76(Mw) at a mean distance of 15.8 km.

Additional seismic data is presented in later sections and in Appendix C.

Secondary effects of strong ground motion include Tsunami, seiche, liquefaction, settlement, landslides, etc. Tsunami (seismic sea wave and seiche (standing wave) are not hazards inherent to the site due to its distant proximity to the ocean and large bodies of water. Likewise, seismically induced landsliding is not a hazard inherent to the relatively flat Site. Earthquake induced liquefaction and seismic settlement affecting the proposed site development are discussed below.

6.6 LIQUEFACTION POTENTIAL

Liquefaction is a seismic phenomenon in which saturated cohesionless soils (sands) lose strength when severely shaken and develop excess pore pressures. As stated in the CDMG (1997) report, “In order to be susceptible to liquefaction, potentially liquefiable soils should be saturated or nearly saturated. In general, liquefaction hazards are most severe in the upper 50 feet of the surface…”

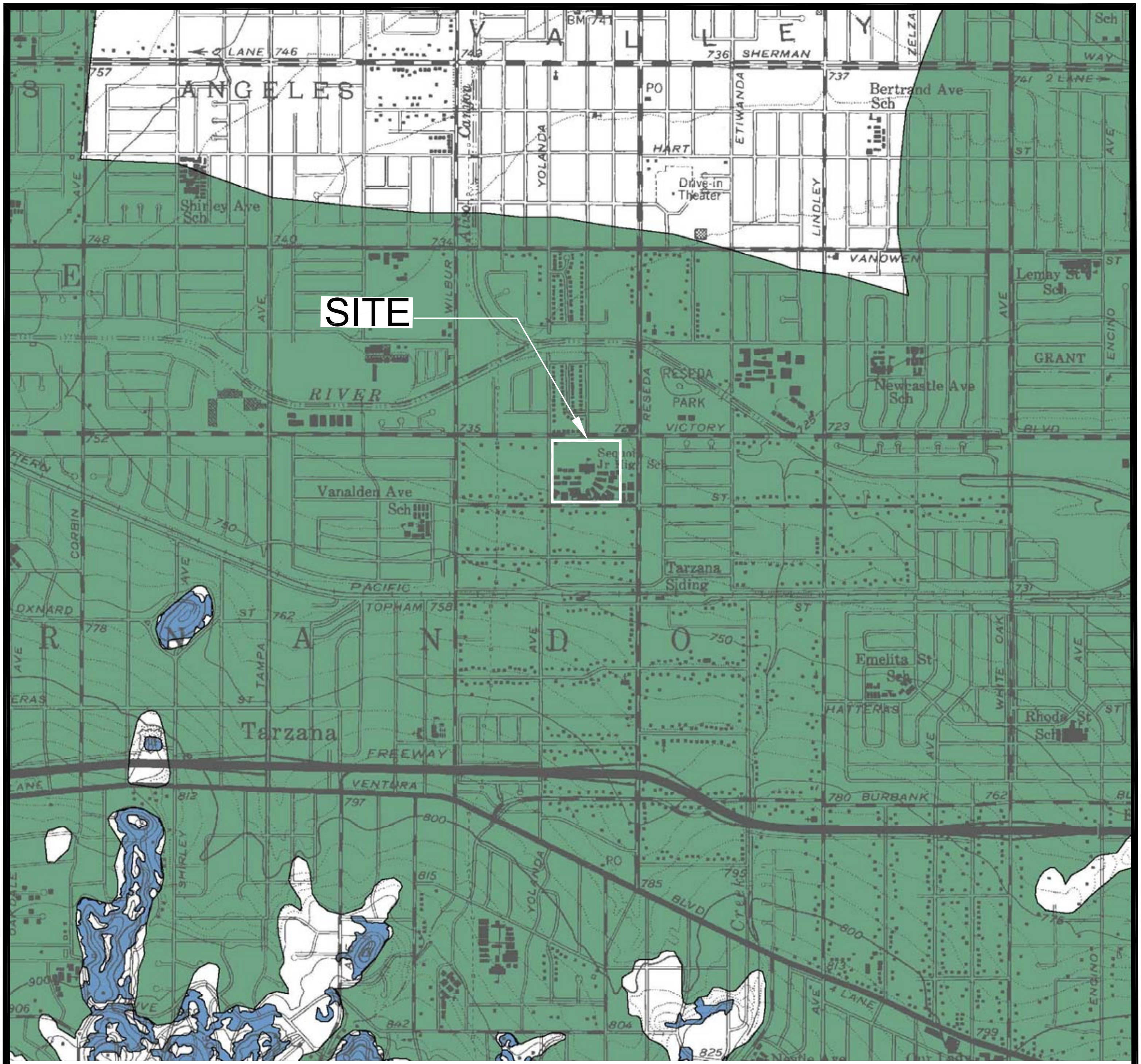
The Site is in an area zoned by the State as being susceptible to liquefaction (CGS, 1998) (see Figure 4). A seismic settlement analyses was performed using the computer program GeoSuite Liquefaction. For liquefaction/seismic settlement evaluations the 2013 CBC / ASCE 7-10 designates a ground motion with a 2% chance of being exceeded in 50 years (2475 year return period) be utilized. The mean magnitude from this PSHA is 6.76 (Mw) with a mean distance of 15.8 km from the property. The modal magnitude from this analyses is 6.6 (Mw) and the modal distance is 15.5 km from the property. The peak ground acceleration in accordance with Section 11.8.3 of ASCE 7 is 0.67g. These parameters were utilized in our seismically induced settlement analyses and yielded seismically induced settlements on the order of 1.1 to 3.6 inches in the CPT Soundings and 1.5 to 3.9 inches in the borings, see Appendix C. Differential seismic settlement is typically anticipated to be one-half of the total seismic settlement. However, it appears that the seismically induced settlement will be widespread over the entire site and therefore a differential settlement of 1 inch across 30 feet may be utilized for design.

The analyses were conducted using the SPT data from the truck mounted hollow-stem auger borings. These SPT tests were performed using a 140-pound automatic trip hammer dropped 30 inches. The SPT sampler did not have a liner. Field N-value blow counts were normalized to 1 ton/square foot and corrected for the rig efficiency, hammer type, sampler type (no liner), rod length, and fines content (where applicable) as described in the Recommended Procedures for Implementation of CDMG Special Publication 117 (SCEC 1999).

Due to the flat nature of the Site and vicinity, and without adjacent sloping free faces, the potential for lateral spreading is negligible. As such anticipated lateral spread is less than 3 inches.

6.7 HYDRO-COLLAPSE

Based on consolidation testing of the underlying soils, the potential for hydro-collapse of the underlying soils to a depth of 50 feet below the existing ground surface is low.



MAP EXPLANATION

Zones of Required Investigation:

🟩 Liquefaction
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

🟦 Earthquake-Induced Landslides
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

SEISMIC HAZARDS MAP

SOCES
18605 Erwin Street
Reseda, California

Source:
California Geological Survey,Seismic Hazard Zones Map, Canoga Park Quadrangle, Official Map Released February 1, 1998.

GORIAN & ASSOCIATES, INC.
APPLIED EARTH SCIENCES

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Scale:1"= 2000'	Drawn by: Approved by:	Figure 4

7.0 INFILTRATION EVALUATION

The feasibility of infiltration was evaluated for the site in the referenced report (Gorian, 2016; attached hereto in Appendix D). Based upon the hydrometer test results the minimum infiltration rates based on the soil classification indicate the onsite clayey soils are not suitable for infiltration. However the actual tests performed in the test pits and in the borings indicate the onsite soils in the areas of TP-1, TP-3 and TP-4 and the deeper soils tested in Borings BI-1 (adjacent TP-1) and BI-3 (adjacent TP-3) have an infiltration rate of on the order of 1 inch per hour. The infiltration rates were faster in the areas of TP-3, TP-4 and BI-3. Shallow BMPs should not be located in the areas of TP-2 or TP-5 due to unacceptable infiltration rates.

If utilized, infiltration BMPs should be located a minimum of 10 feet from building foundations. However, the City of Los Angeles guidelines would deem the site unsuitable for infiltration because infiltration water may saturate soils susceptible to liquefaction.

8.0 GEOTECHNICAL CONCLUSIONS AND RECOMMENDATIONS

From a geotechnical standpoint, our geotechnical evaluation for the proposed project has found that with proper design and construction practices, the Site is suitable for future development/modernization. Geotechnical recommendations presented in the following sections of this report should be incorporated into the design and construction of the project. Recommendations concerning site preparation, grading and foundations are provided in the following sections. The presence of existing improvements adjacent to the construction areas should be considered during all design and construction activities.

8.1 SOIL EXPANSIVENESS

Soil expansion tests were performed on three representative soil samples obtained from the site. Test results indicate the underlying near surface materials have a medium expansion potential, in the 51-90 expansion index range.

8.2 SOIL CORROSIVITY

Four samples of on-site soils were obtained and sent to Atlantic Consultants for soil chemistry analyses. The results, attached in Appendix B, indicate concrete in contact with the onsite soils is negligible for sulfate and chloride exposure. However, the onsite soils are moderately corrosive to corrosive to ferrous metals and corrosive to copper piping.

8.3 GEOTECHNICAL SEISMIC DESIGN

The site may experience strong ground shaking from seismic events generated on regionally active faults. Seismic ground motion parameters were evaluated using a simplified code based approach and ground motion procedures for seismic design. The simplified code based approach follows the procedures in the 2013 California Building Code (CBC) based on ASCE/SEI 7-10 Section 11.4. The 2013 CBC is based on the 2012 IBC which references the Minimum Design Loads for Buildings and Other Structures (ASCE/SEI 7-10) as indicated under Effective use of the IBC/CBC on page ix of the 2013 CBC. Retrofit values were obtained from ASCE 41-13 using the standard provided by LAUSD of BSE-1E.

Seismic ground motion values are initially determined based on site class B (rock) conditions. The values are adjusted to obtain the maximum considered earthquake (MCE) spectral acceleration values for the site based on its site class of D. The seismic design parameters for the site's coordinates (latitude 34.1848° North and longitude 118.5394° West) were obtained from the USGS web based spectral acceleration response maps and calculator:
<http://earthquake.usgs.gov/designmaps/us/application.php>

The values are provided below with detailed information contained in Appendix C.

The purpose of the building code earthquake provisions is primarily to safeguard against major structural failures and loss of life, not to limit damage nor maintain function. Therefore, values provided in the building code should be considered minimum design values and should be used with the understanding site acceleration could be higher than addressed by code based parameters. Cracking of walls and possible structural damage should be anticipated in a significant seismic event.

Seismic Parameters based on ASCE/SEI 7-10

CHAPTER 16 TABLE/FIGURE NO.	SEISMIC PARAMETER	VALUE
Figure 1613.5 (3)	Short Period Mapped Acceleration (S_s)	1.84g
Figure 1613.5 (4)	Long Period Mapped Acceleration (S_1)	0.65g
Table 1613.5.2	Site Class Definition	D
Table 1613.5.3 (1)	Site Coefficient (F_a)	1.0
Table 1613.5.3 (2)	Site Coefficient (F_v)	1.5
Equation 16-37	$S_{MS} = F_aS_s$	1.84g
Equation 16-38	$S_{M1} = F_vS_1$	0.97g
Equation 16-39	$S_{DS} = 2/3S_{MS}$	1.23g
Equation 16-40	$S_{D1} = 2/3S_{M1}$	0.65g

Seismic Parameters based on ASCE 41-13 Retrofit Standard, BSE-1E

Section	SEISMIC PARAMETER	VALUE
2.4.1.4	$S_{S,20/50}$	0.805g
2.4.1.4	$S_{1,20/50}$	0.288g
2.4.1.6.1	Site Class Definition	D
Table 2-3	F_a	1.178
Table 2-4	F_v	1.824
Equation 2-4	$S_{XS,BSE-1E}$	0.948g
Equation 2-5	$S_{X1,BSE-1E}$	0.525g

8.4 SITE PREPARATION

Areas of new construction will require site preparation prior to foundation excavation or slab subgrade preparation. The following preliminary site preparation and grading recommendations are for the preparation of areas for construction of new buildings and other exterior site improvements. These recommendations should be reviewed when plans are available.

For the modernization of the school, footing locations and dimensions of the existing structures are unknown; therefore, care should be taken to protect the foundations and their supporting soils at all times. The presence of the existing buildings should be considered during all design and construction activities. All aspects of grading including site preparation, grading, and fill placement should be per the applicable Building Code.

8.4.1 Site Cleanup

Existing improvements, structures, etc., including utility lines, foundations, poles, and pavement to be demolished should be removed from the areas of construction. The removals should also include vegetation, debris, structures, etc.

8.4.2 Soil Removals

Below new buildings and 5 horizontal feet beyond, non-engineered fill soils where encountered should be removed to firm in-place native soils. In addition, within the footprint of the proposed structures and to a minimum distance of five feet beyond, at least three feet of newly compacted soils should be provided below shallow foundations. Where deep foundations are proposed existing fill should be removed where encountered and a minimum of two feet of newly compacted fill soils should be provided.

In areas of proposed paving, a minimum of two feet of newly compacted fill should be provided. Existing fill soils, where encountered, should be evaluated prior to placing new fill soils.

Due to possible variations in the subsurface materials, local areas of deeper removals may be necessary. After these removals are completed as addressed above, the exposed ground surface should be observed by a field representative of this office to confirm that it is suitable for placement of certified fill. No fill soils may be placed until completion of the geotechnical observation.

Removals adjacent existing structure footings should not extend below a 2(horizontal):1(vertical) line extending down from the top of the footing or may need to be performed in slots to protect the existing foundations. Removal bottoms should be observed by a representative of this office. In addition, removals adjacent existing footings should be observed by a representative of this office as the removals are made.

Soil removal within existing buildings to be improved should be based on observations by a representative of this office of the existing soil conditions after being exposed by the general contractor. At this time no significant soil removals are anticipated within the existing buildings to be improved.

8.4.3 In-Place Soil Processing

Following soil removals, the underlying 8 to 12 inches should be scarified, moisture conditioned to above the optimum moisture content, and compacted to at least 90% relative compaction.

8.4.4 Fill Placement

On-site soils may be reused as fill soils providing the soils are free of major vegetation, trash, and debris. Per the applicable building code, rocks greater than 6 inches in diameter (or smallest dimension) should be excluded from all fills placed. Suitable fill soils should be placed in thin (6 to 8 inch maximum) lifts, brought to above optimum moisture content, and compacted to at least 90% relative compaction.

8.4.5 Relative Compaction and Testing

Relative Compaction is the ratio of in-place dry soil density to the maximum dry soil density determined in general conformance with ASTM test method D 1557-91. In-place soil densities may be determined by conducting sand cone or nuclear gauge tests in general accordance with ASTM D1556 or ASTM D6938, respectively. In-place soil density tests (compaction testing) should be performed during the rough grading at locations and elevations considered representative of the tested areas. Minimum testing should be one compaction test every two feet of vertical lift and every 1000 cubic yards of fill placed. In addition at least one test should be within each building pad.

8.4.6 Temporary Excavations

Shallow excavations for construction made in cohesive properly engineered fill or firm natural soils should stand with vertical sides to a depth of 5 feet, where adjacent foundations are not affected. Excavations deeper than 5 feet should be shored or sloped at a ¾(h):1(v) gradient to a maximum height of 15 feet. Sandier layers of soil exist and may require further laying back or shoring. The slopes should be observed periodically while the excavation remains open.

During construction, the contractor is responsible for the excavation and maintenance of safe and stable slope angles considering the subsurface conditions and the methods of operations. Temporary excavations should be made per the applicable requirements of the current Cal/OSHA excavation regulations. Surcharge loads should be setback from the top of temporary excavations a minimum horizontal distance of 10 feet.

8.4.7 Shored Excavations

Shoring should be designed by a shoring engineer for lateral earth pressures plus lateral pressure imposed by adjacent surcharges. Cantilevered shoring systems should be designed for an active earth pressure equal to 40 pounds per cubic foot for a temporary condition. The value of 40 pcf is an ultimate value without a factor of safety. The width of active pressure acting on the pile below the bottom of the excavation may be taken as the pile diameter. The width should be increased to two pile diameters for a cantilevered soldier pile.

Shoring pressures do not include lateral loads from surcharges such as traffic, cranes, pump or concrete trucks, or material storage near the top of the excavation. Construction surcharging should be maintained, as a minimum, a horizontal distance equal to the depth of excavation from the shoring unless the shoring is specifically designed for surcharge loading. The above active pressures should be reviewed when the depth and location of the subterranean excavation is provided to this office.

8.5 SHALLOW FOUNDATION DESIGN

Geotechnical recommendations for conventional foundation systems are presented below based on soils with a medium expansion potential (51-90 expansion index range).

8.5.1 Conventional Footings – New Construction

Continuous and isolated footings may be designed to impose an allowable bearing pressure of 2,000 pounds per square foot (psf). These bearing pressures apply for dead plus live loads and may be increased by one-third when considering wind or seismic loads.

Continuous and isolated footings should have minimum widths of 12 and 18 inches, respectively. The footings should be embedded a minimum of 24 inches. Embedment of exterior footings should be measured from the lowest adjacent exterior grade. Interior footings may be measured from the top of slab. Bearing values may be increased by 300 psf for each additional foot of depth above the minimum and 100 psf for each additional foot of width to a maximum of 2,500 psf.

Steel reinforcement should be per the structural engineer's recommendations; however, minimum continuous footing reinforcement should consist of two number 4 bars in the top and bottom (total of 4 bars).

8.5.2 Conventional Footings - Retrofit

The proposed seismic retrofit may be supported on continuous and isolated footings founded in existing fill soils or competent native soils and should be a minimum of 12 and 24 inches wide, respectively. The footings may be designed to impose an allowable soil bearing pressure of 1,500 psf provided they are a minimum of 24 inches below the lowest adjacent grade. The above net allowable bearing capacity may be increased by one-third for short-term wind and seismic loads.

The embedment should be a minimum of 24 inches for perimeter and interior footings. The lowest adjacent grade is the lowest soil grade adjacent the footings, interior or exterior. After excavation, footing bottoms should be compacted. Interior footings may be measured from the top of slab.

Steel reinforcement should be per the structural engineer's recommendations. However, minimum reinforcement for continuous footings should consist of two #4 bars in the top and bottom (minimum total of four bars).

8.5.3 New Footing Surcharge on Existing Adjacent Footings

Where new footings are utilized for the seismic retrofit the footings should be founded at the same depth as the existing footings. Because of the influence of the new applied load, new footings will add vertical stress to the soils underlying the existing adjacent footings. For continuous wall footings and for square pad footings, approximately 20% and 10% of the wall or square footing load in psf, respectively, will be distributed under the adjacent existing wall footing. The resulting settlement can be calculated once footing sizes and loads along with the location of the new footings relative to existing footings are known.

The soil stresses from existing footings should not have an effect on adjacent new footing settlement since stresses from the existing footings are already applied and settlement has already occurred.

8.5.4 Mat Foundation

Mat slabs may be designed using a modulus of subgrade reaction "k" of 100 pounds per cubic inch at the surface of a properly prepared building pad. A bearing pressure of 1,500 psf may be used at an embedment of 24 inches.

8.5.5 Resistance to Lateral Loads

Lateral forces on foundations in fill soils may be resisted by passive earth pressure and base friction. Lateral passive earth pressure may be considered equal to a fluid weighing 240 pounds per cubic foot (pcf) where the footing is on level ground. Base friction may be computed at 0.35 times the normal load. These values have a factor of safety of 1.5 and may be combined without reduction.

8.5.6 Foundation Settlement

Static settlements of new footings due to static loading are anticipated to be minor with settlement on the order of ½ to ¾-inch. This should be confirmed when the actual foundation loads become available. Differential settlements between adjacent columns with similar static loading are anticipated to be on the order of one half the total settlements. For columns 40 feet apart, settlements on the order of ½ inch across 40 feet may be anticipated. Differential settlement between new and existing foundations should be evaluated when the actual foundation locations and loads become available.

The potential for seismic induced settlement due to liquefaction and lateral spread has been previously discussed in this report. Seismic induced movements are in addition to the potential for static settlement.

All structures settle during construction and minor structure settlement can occur after construction during the life of the project. Minor wall or slab cracking may also be associated with settlement or expansive soil movement. Wall cracking can also occur associated with expansion and contraction of structural members due to thermal or moisture changes. Settlement or soil movement could occur if the soils become saturated due to excessive water infiltration generally caused by excessive irrigation, poor drainage, etc.

8.5.7 Footing Excavations

Footing excavations should be cut square and level and cleaned of slough and soils silted into the excavations. A representative of this office should observe the footing excavations prior to placing reinforcing steel. Footings should be cast as soon as possible to avoid deep desiccation of the footing subsoils. Soil excavated from footing trenches should not be spread over areas of construction unless properly compacted.

8.5.8 Slabs-On-Grade

The concrete slabs-on-grade within the building interiors should be a minimum of 5 inches thick and underlain by a minimum of 4 inches of aggregate or as required by the applicable building code. Reinforcement should consist of a minimum of No. 4 bars at 18 inches on centers in both directions or per the structural engineer's design. The slab steel reinforcement should be extended into the foundations to within 3 inches of the footing bottom at 36 inches on center.

8.5.9 Concrete Placement and Cracking

Minor cracking of concrete slabs is common and is generally the result of concrete shrinkage continuing after construction. Concrete shrinks as it cures resulting in shrinkage tension within the concrete mass. Since concrete is weak in tension, development of tension results in cracks within the concrete. Concrete should be placed using procedures to minimize the cracking within the slab. Shrinkage cracks can become excessive if water is added to the concrete above the allowable limit and proper finishing and curing practices are not followed. Concrete mixing, placement, finishing, and curing should be performed per the American Concrete Institute Guide for Concrete Floor and Slab Construction (ACI 302.1R). Concrete slump during placement should not exceed the design slump specified by the structural engineer. Where shrinkage cracks would be unsightly, concrete slabs on grade including post-tensioned slabs should be provided with tooled crack control joints at 10-15 foot centers or as specified by the structural engineer.

8.5.10 Under-Slab Treatment

Where moisture sensitive floor coverings will be utilized, an appropriate moisture vapor retarder layer should be installed and maintained below the concrete slabs to reduce moisture vapor transmission through the slab. Ten-mil plastic sheeting is commonly used as a moisture vapor retarder layer. If a higher degree of moisture retarder is warranted, a retarder in general accordance with ASTM E 1745-97 *Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs* should be considered below the interior concrete slabs on-grade installed per ASTM E1643-98(2005) *Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs*.

Perforations through the moisture vapor retarder such as at pipes, conduits, columns, grade beams, and wall footing penetrations should be sealed per the manufacturer's specifications or ASTM E1643-98(2005) *Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs*. Proper construction practices should be followed during construction of the slab on-grade. Repair and seal tears or punctures in the moisture barrier that may result from the construction process prior to concrete placement.

Minimizing shrinkage cracks in the slab-on-grade can further minimize moisture vapor emissions. A properly cured slab utilizing low-slump concrete will reduce the risk of shrinkage cracks in the slab as described herein.

The concrete contractor should be made aware of the moisture vapor retarder and required to protect the layer. Perforations made in the layer by the concrete contractor should be properly sealed prior to concrete placement. In addition, if the concrete is placed directly on top of the moisture retarder layer the concrete contractor should make the necessary changes in the concrete placement and curing. Placing the concrete directly on top of the moisture vapor retarder layer allows the layer to be observed for damage directly prior to concrete placement.

The slabs should be tested for moisture content prior to the selection of the flooring and adhesives. Moisture in the slabs should not exceed the flooring manufacturer's specifications. The concrete surface should be sealed per the manufacturer's specifications if the moisture readings are excessive.

Where cuts are made into the slab for future construction, the moisture vapor retarder layer should be repaired per the manufacturer's recommendation. Information regarding the need to repair the moisture vapor retarder layer and information on the selection of acceptable floor coverings should be conveyed to the school district personnel.

8.5.11 Moisture Penetration

Conventional footings and reinforced slab-on-grade subgrade soils should be premoistened to 3% over the optimum moisture content for a depth of 18 inches. However, the subgrade soils should not be flooded or soaked creating a saturated condition. A representative of this office should observe the subgrade soil premoistening prior to casting the concrete. Soils silted into the footing excavations during the premoistening operations should be removed prior to casting the concrete.

8.6 FLAGPOLE FOOTING RECOMMENDATIONS

New, remodeled or retrofit structures may be supported by flagpole footings. These footings (piles) may be designed using an allowable lateral bearing pressure of 240 psf per foot of depth for level ground (maximum pressure should not exceed 2,500 psf) and friction between the soil and concrete of 0.35. These values have a factor of safety of 1.5 and may be combined with no reduction. If deflection of pole foundations is a concern, deflection calculations can be provided when loads are known. Flagpole footings (piles) are anticipate to be embedded above the zones of possible seismic induced settlement and therefore should not be affected by downdrag.

8.6.1 Flagpole Footing Construction

Due to layers of sand, some caving or raveling should be anticipated during the flagpole footing construction. The drilling contractor should be prepared to use casing in areas where excessive caving occurs.

Groundwater was encountered in our exploratory borings at a depth of approximately 30 feet below ground surface. It is unlikely that water will be encountered during drilling, if flagpole footings are shorter than about 30 feet. To minimize caving potential, flagpole footings should be filled with concrete in a timely manner and not left open overnight.

Where flagpole footings are installed below groundwater, the drilling contractor should be prepared to use casing and/or drilling mud. Where concrete is placed below groundwater, it will be necessary to use a tremie pipe that extends to the bottom of the flagpole footing. While placing the concrete, the tremie pipe must be maintained below the top of the concrete while below the water table. Where casing is required, a sufficient head of concrete must be maintained inside the casing while the casing is pulled in order to maintain stability of the hole. Due to the complexity of constructing concrete flagpole footings below the groundwater table, this procedure should be carefully controlled and monitored. To minimize caving potential, flagpole footings that encounter groundwater should be drilled and cast in the same day.

Care should be exercised when casting adjacent flagpole footings to avoid blowout from one excavation into the other. From an engineering standpoint, the preferred method would be to excavate, cast, and let the concrete achieve initial set prior to excavating the adjacent flagpole footing. However, where spacing between adjacent flagpole footings is greater than three times the largest flagpole footing diameter, satisfactory results have been achieved by casting adjacent flagpole footings simultaneously, keeping the differential elevation of the concrete less than five feet between flagpole footings.

Flagpole footing excavations should be observed by a representative of this office prior to setting reinforcing steel to verify the anticipated geotechnical conditions or to evaluate any unanticipated conditions encountered.

8.7 BLOCK (SCREEN) WALLS

Continuous footings founded on level ground may be designed to impose a uniform allowable soil bearing pressure of 1,500 psf. The above net allowable bearing capacity may be increased by one-third for short-term wind and seismic loads. Footings should be embedded a minimum of 24 inches into engineered compacted fill and should have a minimum width of 12 inches. Footing reinforcement should be per the structural engineer's recommendations.

Footings should be cut square and level and cleansed of all loose slough prior to casting concrete. Soil excavated from the footing trenches should not be spread over any areas of construction unless properly compacted. Footing excavations must be observed by the project geotechnical consultant prior to placing reinforcing steel. The footings should be cast as soon as possible to avoid deterioration of the footing subsoils.

8.8 RETAINING WALLS

Preliminary recommendations for retaining walls, if any, are presented below. These recommendations should be reviewed and revised if necessary when the grading plans become available.

8.8.1 Retaining Wall Foundations

Continuous footings founded on level ground may be designed to impose a uniform allowable soil bearing pressure of 2,000 psf. The above net allowable bearing capacity may be increased by one-third for short-term wind and seismic loads. The maximum pressure under the toe should not exceed the allowable bearing pressure. Footings should be embedded a minimum of 24 inches into engineered compacted fill and should have a minimum width of 24 inches. Footing reinforcement should be per the structural engineer's recommendations.

Footings should be cut square and level and cleansed of all loose slough prior to casting concrete. Soil excavated from the footing trenches should not be spread over any areas of construction unless properly compacted. Footing excavations must be observed by the project geotechnical consultant prior to placing reinforcing steel. The footings should be cast as soon as possible to avoid deterioration of the footing subsoils.

8.8.2 Active Earth Pressures

Retaining walls should be designed to resist an active pressure exerted by compacted backfill or retained soil. Walls that may yield at the top should be designed for an equivalent fluid pressure equal to 45 pcf for a level condition behind the wall. If water is allowed to saturate the backfill, the lateral pressure could exceed the active pressure provided. Clayey or expansive soils should not be used for backfilling behind retaining walls. Wall heights are measured from the top of the retained material to the bottom of the foundation.

Footings located behind retaining walls should be embedded below a 2(horizontal):1(vertical) line extending up from the base of the wall or the wall should be designed to support the footing surcharge. A surcharge equal to 2 feet of soil should be used for light traffic loading adjacent to the wall.

8.8.3 Earth Pressures-Seismic

For seismic design of retaining walls over 6 feet high, the additional lateral earth pressure should be taken as an inverted triangular pressure distribution with the maximum pressure applied at the top of the wall. The seismic equivalent fluid pressure may be taken as 14 pounds per cubic foot for level backfill. The resultant of the inverted triangular pressure should be applied at 0.67H from the base of the wall. This force is added to the static earth pressures. Walls less than 6 feet high are not required to have a seismic pressure in the design (see CBC Section 1803*A*.5.12).

8.8.4 Lateral Resistance

Lateral forces exerted by retained soil or compacted fill may be resisted by passive soil pressure and friction. Passive soil pressure may be taken as an equivalent fluid pressure of 250 pcf up to a maximum of 1,500 psf, where the footing is located on level ground. Friction between the bottom of the footings and soil may be taken as 0.35. The values have a factor of safety of 1.5 and may be combined with no reduction.

8.8.5 Retaining Wall Drainage and Backfill

Retaining walls should be provided with a drainage system consisting of a minimum 1 foot wide continuous section of No. 4 rock (or pea gravel). The drain material should be drained by a perforated drainpipe (perforations 3/8" or smaller, perforations down) located in the lower portion of the gravel. The invert of the drainpipe should be at least 6 inches below any adjacent slab-on-grade.

Retaining walls should be waterproofed where moisture infiltration through the wall would be a problem. In addition, the drain material should extend from the base of the wall to the top of the wall. The upper 2 feet of exterior wall backfill should consist of compacted native soils. A layer of filter cloth should be placed between the drain material and 2 foot soil cap to minimize the migration of fines into the drain material.

All wall backfill should have a low expansion potential and be compacted to a minimum of 90% of the maximum soil density using light equipment. Onsite clayey soils are not suitable for wall backfill. The retaining wall backfill should be benched into the backcut where the backcut is inclined less than 3/4(h):1(v). Onsite sandy soils excluding oversized rock or sand and gravel clayey soils may be suitable for wall backfill. The backfill should be compacted to a minimum of 90% of the maximum dry soil density using light equipment.

8.9 EXTERIOR SLABS AND WALKWAYS

Exterior concrete slabs-on-grade and walkways should be a minimum of 4 inches thick and underlain by a minimum of 4 inches of sand. Exterior slabs should be reinforced with a minimum of #3 bars on 24 inch centers in each direction. All slabs should have crack control joints (full depth joints) at intervals of 10 to 15 feet. Sidewalks may consist of unreinforced concrete provided the walks are provided with crack control joints at spacing equal to the walk width.

Concrete subgrade soils should be properly placed and compacted for the support of the concrete flatwork. Prior to placing concrete, the subgrade soils should be premoistened to a minimum of 3% over the optimum moisture content for a minimum depth of 12 inches. Proper premoistening can reduce the risk of slab subgrade expansion, if used in addition to other preventive measures. The subgrade soil premoistening should be observed by this office prior to placing the concrete.

8.10 PRELIMINARY PAVING SECTION

8.10.1 Structural Section

Structural sections consisting of asphaltic concrete (AC) placed over a compacted layer of aggregate base are provided in the table below based on an average R value for the subgrade soils of 11. The asphalt and base should be properly placed and compacted to a minimum of 95% relative compaction. The project civil engineer should determine the appropriate traffic index for the pavement area. If buses will be using any of the drive areas, a higher traffic index and thicker pavement section should be considered.

Asphalt pavements should be maintained by filling cracks that appear and with periodic application of fog sealers to replace surface oils that are lost due to weathering and wear.

PRELIMINARY PAVEMENT SECTIONS	
Traffic Index	"R" Value = 11
4.0	3" AC / 6" AB
5.0	3" AC / 9" AB
6.0	3" AC / 13" AB or 4" AC / 11"
7.0	3" AC / 16" AB or 4" AC / 14"
AC = Asphaltic Concrete AB = Aggregate Base	

8.10.2 Subgrade Preparation

The subgrade soils within areas of proposed paving should be moistened to slightly above the optimum moisture content and compacted to at least 90% relative compaction prior to placing aggregate base.

8.10.3 Aggregate Base Preparation

Aggregate base materials should be moistened to slightly above the optimum moisture content and compacted to at least 95% relative compaction prior to placing concrete.

8.11 SITE DRAINAGE

Positive drainage should be consistently provided and maintained away from structures during and after construction per the grading plan or applicable building codes. In addition, drainage should not be changed creating an adverse drainage condition.

Water should not be allowed to gather or pond against foundations or hardscape allowing water migration into the subgrade. Therefore, landscape watering should be held to a minimum and irrigation systems maintained in good repair. Sprinkler or plumbing leaks should be immediately repaired. Trees should be spaced so that roots will not extend under foundations or slabs. Planters near a structure should be constructed so that irrigation water will not saturate footing and slab subgrade soils.

8.12 PLAN REVIEW

This office should review the building location, grading plans, foundation plans and specifications prior to starting construction to review conformance to recommendations in this report. Additional analysis and recommendations may be necessary based on this plan review.

9.0 CLOSURE

This report was prepared under the direction of a registered geotechnical engineer and certified engineering geologist. No warranty, expressed or implied, is made as to conclusions and professional advice included in this report. Gorian and Associates, Inc. disclaims any and all responsibility and liability for problems that may occur if the recommendations presented in this report are not followed.

This report was prepared for Los Angeles Unified School District and their design consultants solely for the design and construction of the development described herein. This report may not contain sufficient information for other uses or the purposes of other parties. The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance. The interpretations may differ from actual subsurface conditions, which can vary horizontally and vertically across the site. Due to possible subsurface variations, a representative of this office should observe all aspects of field construction addressed in this report. Anyone using this report for bidding or construction purposes should perform such independent investigations as they deem necessary.

The scope of the services provided by Gorian and Associates, Inc. and its staff, excludes responsibility and/or liability for work conducted by others. Such work includes, but is not limited to, means and methods of work performance, quality control of the work, superintendence, sequencing of construction and safety in, on, or about the jobsite.

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Please call if you have any questions regarding this report or require additional information.

Respectfully,

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10.0 REFERENCES

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APPENDIX A

LOGS OF SUBSURFACE DATA

GORIAN
& ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-0-100

SUBSURFACE LOG

Excavation
Number: B-1

Page Number: 1

Date(s) Excavated 6/8/15	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type CME 75	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0								ASPHALTIC CONCRETE (4½") No Base	
	■	■	20	17.8	108	CL		ALLUVIUM: Brown silty CLAY (moist, very stiff).	
						SM		Yellowish brown silty fine SAND (damp, medium dense). Few gravels.	
5	■	◣	4/5/4						
	■	■	19	14.0	100	SM		Yellowish brown clayey silty sand (damp, medium dense). Some calcium carbonate veinlets.	
10		◣	5/8/13						
		■	20	3.6	99	SM		Yellowish brown silty fine to coarse SAND (damp, medium dense).	
15		◣	5/7/8			SP		Yellowish brown fine to coarse SAND (damp, medium dense). Some fine gravels.	
		■	26	4.7	95				
20		◣	6/10/13						
		■	30	5.3	94	SM		Light yellowish brown fine SAND (damp, dense).	
25		◣	9/13/14			SP		Light yellowish brown fine to coarse SAND (damp, medium dense).	
		■	38	5.4	98			At 28'; becoming dense, some fine gravels.	
30		◣	3/3/3			SM		Brown silty fine to coarse SAND (wet, medium dense).	
						CL		Yellowish brown silty CLAY to sandy CLAY (saturated, medium stiff). Auger filled with water after sample at 30' kept full. At 31'; groundwater based on water line on rods.	
		■	20	24.5	100	ML		Pale brown clayey SILT (moist, very stiff). Some fine to coarse gravels.	
35		◣	9/12/9			SM/SC		Light brown clayey to silty fine to coarse SAND (saturated, medium dense). Some fine gravel.	
		☒	48	--	--				

GORIAN
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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-0-100

SUBSURFACE LOG

Excavation
Number: B-1

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40			8/ 11/ 19			CL		Gray sandy CLAY (saturated, very stiff).	
						SM/ GM		Grayish brown to yellowish brown silty fine to coarse SAND with coarse GRAVEL (saturated, dense).	
			55	17.7	115			At 43'; becoming very dense.	
45			2/8/ 12					At 45'; becoming medium dense.	
						SC/ SM		Pale brown clayey SILT to silty CLAY (very moist, very stiff to stiff).	
			24	22.3	104				
50			4/5/ 6						
								Total Depth 51½' Caving @ 40' Groundwater @ 31' Backfilled with cuttings. Topped with asphalt cold patch.	
55									
60									
65									
70									
75									
80									

GORIAN & ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-0-100

SUBSURFACE LOG

Excavation
Number: B-2

Page Number: 1

Date(s) Excavated 6/8/15	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type CME 75	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0								ASPHALTIC CONCRETE (2½") ON AGGREGATE BASE (2½").	
			22	15.7	110	CL		ARTIFICIAL FILL: Brown mottled with dark brown silty CLAY (damp, very stiff).	
			20	15.7	109	CL		ALLUVIUM: Dark brown sandy CLAY (moist, very stiff).	
5			3/2/2						
						SC/CL		Brown very sandy CLAY to clayey SAND (moist, medium stiff to medium dense).	
			24	18.8	98				
						CL		Yellowish brown silty CLAY (moist, very stiff). Common calcium carbonate veinlets.	
10			5/8/10						
			17	18.5	103				
15			7/4/7			SM		Yellowish brown silty fine SAND, few fine gravels (damp, medium dense).	
						SM		Pale yellow fine SAND (damp, medium dense). Friable.	
			24	3.8	91				
20			4/6/10					At 20'; locally thin silt interstratifications to 21'.	
						SP		Light yellowish brown fine to coarse SAND, some fine gravels (damp, medium dense).	
			21	--	--				
25			8/8/6						
			23	13.4	95	SM		Light gray silty fine SAND (moist, medium dense). Iron oxide staining.	
30			3/3/5					At 30'; becoming wet to saturated. Groundwater.	
						CL		Gray silty CLAY (very moist, stiff). Iron oxide staining. Auger fill with water after sample at 30', kept full.	
						SM		Yellowish brown silty very fine SAND (saturated, medium dense).	
			15	20.1	100	CL		Gray silty CLAY (saturated, very stiff).	
35			4/3/16						
						SM		Yellowish brown silty fine to coarse SAND, some fine to coarse gravels (saturated, medium dense to dense).	
			42	16.0	111				

GORIAN & ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-0-100

SUBSURFACE LOG

Excavation
Number: B-2

Page Number: 2

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40			8/ 10/ 10						
						CL		Dark gray sandy CLAY (saturated, very stiff). Few fine gravels.	
			27	--	--	SM		Gray silty fine to coarse SAND (saturated, medium dense).	
45			6/8/ 12						
						SM		Gray silty fine coarse SAND (saturated, medium dense). At 48'; approximately 2' slough in Auger. No sample attempted at 48'. Auger kept full of water.	
50			3/4/ 13			SP		Light yellowish brown fine to coarse SAND, some fine gravels (saturated, medium dense).	
								Total Depth 51½' Caving @ 48' Groundwater @ 30' Backfilled with cuttings. Topped with asphalt cold patch.	
55									
60									
65									
70									
75									
80									

GORIAN
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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-100

Page Number: 1

Date(s) Excavated 8/22/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 733½'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Description	Remarks
0							ASPHALTIC CONCRETE (2½") on AGGREATE BASE (3").	
	■					CL	ALLUVIUM: Dark brown silty CLAY, trace fine sand (moist, very stiff).	
		■	16	16.5	105			
730								
5	■	■	14	16.7	106			
						CL	Yellowish brown silty CLAY (moist, stiff). Common calcium carbonate veinlets.	
		■	17	20.9	97		At 7'; becoming very stiff.	
725								
10		■	12	18.3	103		At 10'; becoming stiff.	
720		◣	3/4/4					
15		■	19	21.0	99		At 15'; becoming very stiff.	
						ML	Yellowish brown sandy SILT (moist, stiff).	S:M:C 26:52:22
715		◣	3/4/6					
						CL	Yellowish brown silty CLAY (moist, stiff).	
20		■	31	19.7	102		At 20½'; some sand.	
						SM	Light yellowish brown silty fine SAND (damp, dense).	
710		◣	6/5/7			ML	Yellowish brown clayey SILT (very moist to wet, stiff).	
25		■	16	32.5	90			
						SM	Yellowish brown silty fine SAND (moist, medium dense).	
						CL	Yellowish brown silty CLAY (very moist, very stiff).	
						SM	Light gray to yellowish brown silty fine to coarse SAND (saturated, dense). At 28'; groundwater. Some fine gravels. Few coarse gravels.	
705		◣	8/11/23					
30		■	34	17.1	107			
700		◣	6/14/20					
35		■	23	15.1	114		At 35'; becoming medium dense.	
695		◣	9/25/34				At 37½'; becoming very dense.	

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40		■	50/ 6"	14.6	107			Light gray to yellowish brown silty fine to coarse SAND (saturated, dense).	
690		◣	5/6/ 14			CL		Brown silty CLAY (saturated, very stiff). Paleosol?	
						SM		Light yellowish brown silty fine SAND (saturated, medium dense).	
45		■	18	23.2	104	CL		Light yellowish brown silty CLAY (saturated, very stiff).	
685		◣	3/7/ 14			SM		Light yellowish brown silty fine to coarse SAND, some fine gravels (saturated, medium dense).	
50		■	50/ 6"	16.2	112				
								Total Depth 50½' No caving observed Groundwater @28' Backfilled with cuttings. Topped with cold patch.	
680									
55									
675									
60									
670									
65									
665									
70									
660									
75									
655									
80									

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation Number: B-101

Page Number: 1

Date(s) Excavated 8/22/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 734'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (2") on AGGREATE BASE (3").	
	■					CL	▨	ALLUVIUM: Dark brown silty CLAY (moist, very stiff).	
		■	16	18.1	103		▨		
						CL	▨	Brown to yellowish brown silty CLAY (moist, stiff). Trace fine sand. Some calcium carbonate veinlets.	
730							▨		
5		■	11	16.4	99		▨		
	■						▨		
		■	15	20.3	98		▨	At 7'; becoming very stiff.	
725							▨		
10		■	15	16.7	108		▨		
720						SM	░	Light yellowish brown silty fine to coarse SAND (damp, medium dense). Friable.	
15		■	28	6.5	95		░		
						SP	░	Light yellowish brown fine SAND (damp, medium dense). Friable.	
715							░		
20		■	35	2.9	96		░		
						SP	░	Light yellowish brown fine to coarse SAND (damp, medium dense). Friable.	
710							░		
25		■	38	3.6	96		░		
								Total Depth 26' No caving observed No groundwater encountered Backfilled with cuttings. Topped with cold patch.	
705									
30									
700									
35									
695									

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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-102

Page Number: 1

Date(s) Excavated 8/22/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 733'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation	Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
	0								ASPHALTIC CONCRETE (2") on AGGREATE BASE (3").	
			■	14	18.0	104	CL		ALLUVIUM: Dark brown silty CLAY (moist, stiff).	
730							CL		Yellowish brown silty CLAY (moist, stiff). Trace fine sand.	
	5	■	■				SM		Yellowish brown silty fine SAND (moist, medium dense).	
				15	15.2	102	CL		Yellowish brown silty CLAY (moist, stiff). Common calcium carbonate veinlets. At 7'; becoming very stiff.	
725			■	25	22.0	101	CL		Brown silty CLAY (moist, very stiff). Common calcium carbonate veinlets.	
	10		■	26	19.7	106	CL		Yellowish brown silty CLAY (moist, very stiff). .	
							SC		Yellowish brown clayey fine SAND (moist, medium dense).	
720	15		■	32	4.6	98	SP		Light yellowish brown fine SAND (damp, medium dense).	
715	20		■	32	2.1	96	SP		Light yellowish brown fine to coarse SAND (damp, medium dense). Some fine to coarse gravels. Friable.	
710	25		■				SC		Gray clayey fine to coarse SAND (very moist, medium dense).	
				21	16.9	108	CL		Grayish brown sandy CLAY (very moist, very stiff).	
705	30		■	12	41.6	82	CL		Yellowish brown silty CLAY (very moist to saturated, stiff).	
700									Total Depth 31' No caving observed Groundwater at 28½' Backfilled with cuttings. Topped with cold patch.	
	35									
695										

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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-103

Page Number: 1

Date(s) Excavated 8/22/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 735'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
735 / 0								ASPHALTIC CONCRETE (2½") on AGGREATE BASE (2½").	
						CL		ARTIFICIAL FILL: Brown silty CLAY (moist, hard).	
		■	34	16.2	106				
						CL		ALLUVIUM: Yellowish brown silty CLAY (moist, stiff).	
730 / 5	■	■	14	12.6	99				
						SC		Yellowish brown clayey fine SAND (moist, medium dense).	
						CL		Yellowish brown silty CLAY (moist, very stiff). Common calcium carbonate veinlets.	
		■	17	17.6	99				
725 / 10		■	27	17.3	109			At 10'; some porosity.	
						SM		Yellowish brown silty fine SAND (moist, medium dense).	
720 / 15		■	28	7.9	107				
						SP		Light yellowish brown fine to coarse SAND (damp, medium dense). Friable.	
715 / 20		■	24	8.5	96				
710 / 25		☒	41					At 25'; no recovery, cobble in tip.	
								Total Depth 26' No caving observed No groundwater encountered Backfilled with cuttings. Topped with cold patch.	
705 / 30									
700 / 35									

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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-104

Page Number: 1

Date(s) Excavated 8/23/16 and 8/25/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 732½'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (2½") on AGGREGATE BASE (3").	
	■					CL		ALLUVIUM: Brown silty CLAY (moist, very stiff).	
730		■	16	23.4	96				
5	■	■	20	21.0	101			At 5'; common calcium carbonate veinlets.	
725		■	24	21.5	99	CL		Yellowish brown silty CLAY (moist, very stiff). Common calcium carbonate veinlets.	
10		◣	5/7/7			SC		Yellowish brown clayey fine SAND (moist, medium dense).	
720									
		■	17	19.8	96	CL		Yellowish brown silty CLAY (moist, very stiff). Some calcium carbonate veinlets.	
15		◣	3/4/5			SC-SM		Yellowish brown silty to clayey fine SAND (moist, loose to medium dense).	S:M:C 54:29:17
715						CL		Yellowish brown silty CLAY (moist, hard).	
		■	34	15.8	106				
						SP		Yellowish brown silty fine to coarse SAND, some fine to coarse gravels (damp, dense).	
20		◣	3/6/15			SM		Yellowish brown silty fine SAND (moist, medium dense).	
710									
		■	28	23.9	93	SM		Light yellowish brown silty, very fine SAND (moist, medium dense).	
25		◣	9/12/15			SP		Light yellowish brown fine SAND (damp, medium dense). Friable. Some fine to coarse sand layers.	
705		■	27	7.5	105				
30		◣	5/2/5			SM		Light yellowish brown silty fine to coarse SAND (saturated, loose to medium dense). At 30'; water added inside auger. At 30½'; groundwater.	G:S:M:C 3:59:28:10
700						CL		Gray silty CLAY (saturated, very stiff).	
		■	18	14.9	108	SC		Gray clayey fine to coarse SAND (saturated, medium dense).	
35		◣	5/16/18			ML		Gray sandy SILT (saturated, medium dense to dense).	
						SM		Gray silty fine SAND (saturated, dense).	
695									
		■	25	23.3	102			At 37½'; becoming medium dense.	

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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-104

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40			5/ 11/ 14					Gray silty fine SAND (saturated, medium dense).	
690			50	14.1	113	SP		Light yellowish brown silty fine to coarse SAND, some fine to coarse gravels (saturated, dense).	
45			6/ 10/ 10					At 45'; becoming medium dense.	
685			16	26.1	96	CL		Yellowish brown silty CLAY (saturated, very stiff). Some calcium carbonate veinlets.	
50			5/6/ 7			SM		Light yellowish brown silty fine SAND (saturated, medium dense).	
						SC		Light yellowish brown clayey fine SAND (saturated, medium dense).	

Total Depth 51½'
No caving observed
Groundwater at 30½'

Backfilled with cuttings. Topped with cold patch.

GORIAN
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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-105

Page Number: 1

Date(s) Excavated 8/25/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 734'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (2") on AGGREGATE BASE (4").	
	■					CL	▨	ALLUVIUM: Brown silty CLAY (moist, very stiff).	
		■	18	19.0	101		▨		
730							▨		
5		■	14	18.4	100		▨	At 5'; becoming stiff.	
	■						▨		
		■	14	24.0	90	CL	▨	Yellowish brown silty CLAY (moist, stiff). Common calcium carbonate veinlets.	
725							▨		
10		■	27	19.7	96		▨	At 10'; becoming very stiff.	
720						SM	░	Light yellowish brown silty fine to coarse SAND (damp, medium dense). Few fine to coarse gravels.	
15		■	16	7.3	107		░		
						SP	░	Light yellowish brown fine SAND (damp, medium dense). Friable. Some thin layers of fine to coarse sand with fine gravels.	
715							░		
20		■	27	13.1	94		░		
710							░		
25		■	18	11.3	98		░		
								Total Depth 26' No caving observed No groundwater encountered Backfilled with cuttings. Topped with cold patch.	
705									
30									
700									
35									
695									

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Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-106

Page Number: 1

Date(s) Excavated 8/26/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 734'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation	Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
	0							■	ASPHALTIC CONCRETE (2") on AGGREATE BASE (5").	
			■	16	20.0	103	CL	▨	ALLUVIUM: Brown silty CLAY (moist, stiff).	
730							CL	▨	Yellowish brown silty CLAY (moist, stiff). Trace fine sand.	
	5	■	■	14	15.7	105				
			■	22	21.6	96			At 7'; becoming very stiff. Common calcium carbonate veinlets.	
725										
	10		◣	4/6/7						
			■	14	12.4	104	SM	▥	Yellowish brown silty fine SAND (moist, loose to medium dense).	
720										
	15		◣	4/4/4						S:M:C 65:26:9
			■	18	16.7	98	SM	▥	Light yellowish brown silty fine to coarse SAND (damp, medium dense). Friable.	
715							SP	⠿	Light yellowish brown fine SAND (damp, medium dense). Friable.	
	20		◣	6/10/9						
			■	31	4.9	95	SP	⠿	Light yellowish brown fine to coarse SAND, some fine gravels (damp medium dense). Friable.	
710										
	25		◣	6/8/12						
			■	21	4.1	112	SP	⠿	Light yellowish brown fine SAND (damp, medium dense). Friable.	
705							CL	▨	Yellowish brown silty CLAY (very moist to wet, stiff). Trace fine sand.	
	30		◣	4/4/4						
			■	13	24.6	99			At 32'; groundwater. Water added inside auger.	
							SM	▥	Grayish brown silty fine SAND (saturated, medium dense).	
700										
	35		◣	6/9/12			SM	▥	Yellowish brown silty fine SAND (saturated, medium dense).	
			■	55	13.4	115	SP	⠿	Light yellowish brown fine to coarse SAND, some fine gravels (saturated, very dense).	
695										

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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-106

Page Number: 2

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40			4/8/11			SC		Yellowish brown clayey fine to coarse SAND (saturated, medium dense).	
			16	27.3	97	CL		Yellowish brown to gray silty CLAY (saturated, very stiff).	
690 45			3/5/20			SM		Yellowish brown silty fine SAND (saturated, medium dense).	
						SC		Yellowish brown clayey fine to coarse SAND, some fine to coarse gravel (saturated, medium dense).	
			52	18.5	113	SM		Light yellowish brown silty fine to coarse SAND, some fine to coarse gravels (saturated, dense).	
685 50			9/13/19						
680 55								Total Depth 51½' No caving observed Groundwater at 32' Backfilled with cuttings. Topped with cold patch.	
675 60									
670 65									
665 70									
660 75									
655 80									

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SUBSURFACE LOG

Excavation
Number: B-107

Page Number: 1

Date(s) Excavated 8/26/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 736'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (2") on AGGREATE BASE (3½").	
735						CL	▨	ARTIFICIAL FILL: Brown silty CLAY (damp, hard). Mottled. Roots.	
	■	■	40	13.1	112		▨		
						CL	▨	ALLUVIUM: Brown silty CLAY (damp, very stiff). Slightly porous.	
5		■	20	11.0	104		▨		
730						CL	▨	Yellowish brown silty CLAY, trace fine sand (damp, stiff). Slightly porous.	
	■	■	15	9.7	90		▨		
10 725		■	39	13.8	107		▨	At 10'; becoming hard. Common calcium carbonate veinlets.	
						SM	░	Yellowish brown silty fine SAND (damp, medium dense).	
15		■	30	6.7	103		░		
720						CL	▨	Yellowish brown silty CLAY (moist, very stiff). Common calcium carbonate veinlets	
20 715		■	22	14.5	104		▨		
						CL	▨	Grayish brown silty CLAY (moist, hard). Slightly porous.	
25		■	50	16.2	113		▨		
710						SM	░	Grayish brown silty very fine SAND (moist, dense).	
						SC	▒	Yellowish brown clayey fine SAND (moist, dense)	
30		■	35	15.3	111		▒		
705						CL	▨	Yellowish brown silty CLAY (moist, hard).	
								Total Depth 31' No caving observed No groundwater encountered Backfilled with cuttings. Topped with cold patch.	
35 700									

Project: Los Angeles Unified School District
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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-108

Page Number: 1

Date(s) Excavated 8/26/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 737'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (3") on AGGREATE BASE (4").	
	■					CL	▨	ARTIFICIAL FILL: Brown mottled with dark brown silty CLAY (moist, very stiff).	
735	■	■	22	14.0	113		▨		
						CL	▨	ALLUVIUM: Dark brown silty CLAY, trace fine sand (moist, very stiff).	
5		■	18	17.2	104		▨		
						CL	▨	Yellowish brown silty CLAY, trace fine sand (moist, very stiff).	
730	■	■	15	17.2	97		▨	Below 7'; some calcium carbonate veinlets.	
10		■	18	18.8	100		▨		
725							▨		
						SM	⁞	Yellowish brown silty fine SAND (moist, medium dense).	
15		■	19	7.9	107		⁞		
720							⁞		
20		■	23	14.5	103		⁞		
715							⁞		
						ML	‖	Yellowish brown SILT (moist, very stiff).	
25		■	17	19.8	100		‖		
						SC	▨	Yellowish brown clayey fine SAND (moist, medium dense).	
710							▨		
						CL	▨	Light gray silty CLAY (very moist, very stiff).	
30		■	15	27	91		▨		
						SC	▨	Light gray clayey fine SAND (saturated, medium dense). At 30½'; groundwater.	
								Total Depth 31' No caving observed Groundwater at 30½' Backfilled with cuttings. Topped with cold patch.	
705									
35									
700									

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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-109

Page Number: 1

Date(s) Excavated 8/26/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 738'±
Excavation Dimension 8"	Equipment Contractor 2R Drilling	Equipment Type LAR	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0							■	ASPHALTIC CONCRETE (4") on AGGREATE BASE (6").	
735	■	■	19	11.2	103	CL		ALLUVIUM: Brown silty CLAY (moist, very stiff). Trace fine sand.	
5	■	■	27	6.2	105	SM		Yellowish brown silty fine SAND (damp, medium dense).	
730		■	24	9.8	95				
10		◣	7/7/8			CL		Yellowish brown silty CLAY (damp, very stiff). Some calcium carbonate veinlets.	
725		■	30	8.1	105				
15		◣	6/6/6						
720		■	32	9.1	102	SC		Yellowish brown clayey fine SAND (damp, medium dense).	
20		◣	3/5/6			CL		Yellowish brown silty CLAY (damp to moist, stiff).	S:M:C 29:47:24
						CL		Brown silty CLAY (damp to moist, stiff).	
715		■	25	13.1	104				
25		◣	6/7/7			SM		Yellowish brown silty fine SAND (damp, medium dense).	
710		■	21	13.9	103				
						CL		Brown silty CLAY (very moist to wet, very stiff).	
						SM		Yellowish brown silty fine SAND (moist, medium dense).	
30		◣	10/7/9			CL		Grayish brown silty CLAY (very moist, very stiff).	
705		■	29	16.8	108	SC		Brown clayey fine to coarse SAND (saturated, medium dense).	
35		◣	7/19/12					At 35'; after 5 minutes groundwater levels checked prior to sample. No groundwater.	
						SM		Brown silty fine SAND (saturated, medium dense).	
700		■	28	24.3	102			At 37½'; some silty fine to coarse sand.	
						CL		Yellowish brown silty CLAY (moist, very stiff).	

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SUBSURFACE LOG

Excavation
Number: B-109

Elevation /	Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
	40		◣	12/ 10/ 15					At 40'; after 5 minutes groundwater check. No groundwater.	
							SM		Yellowish brown silty fine to coarse SAND (saturated, medium dense). After sample at 40'; waited 5 minutes, groundwater at 35'. Water added inside auger.	
695			■	32	17.0	107				
	45		◣	4/6/ 15			ML		Grayish brown clayey SILT (saturated, very stiff).	
690			■	30	14.9	117	SC		Gray clayey fine to coarse SAND, some fine to coarse gravels (saturated, medium dense).	
	50		◣	4/6/ 7			CL		Yellowish brown silty CLAY (saturated, stiff). Trace fine sand.	
685									Total Depth 51½' No caving observed Groundwater at 35' Backfilled with cuttings. Topped with cold patch.	
	55									
680										
	60									
675										
	65									
670										
	70									
665										
	75									
660										
	80									

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SUBSURFACE LOG

Excavation
Number: B-110

Page Number: 1

Date(s) Excavated 9/9/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 736'±
Excavation Dimension 8"	Equipment Contractor J & H Drilling	Equipment Type LAR	Hammer Data Manual 30" Drop, #140

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0						CL		ARTIFICIAL FILL: Brown silty CLAY (wet, hard). Mottled.	
735		■	65	22.4	100				
5 730		■	43	17.4	102	SC		ALLUVIUM: Brown clayey fine SAND (moist, dense)	
		■	42	9.4	103	SC		Yellowish brown clayey fine SAND (moist, dense).	
						SM		Yellowish brown silty fine SAND (moist, dense).	
10		■	66	22.3	96	CL		Yellowish brown silty CLAY, some sand (moist, hard).	
725									
						SC		Yellowish brown clayey fine SAND (moist, dense).	
		■	59	12.3	110				
15									
720									
						SM		Light yellowish brown silty fine SAND (damp, very dense).	
		■	100	8.4	100				
20									
715									
		☒	82						
25									
710									
		■	70	7.6	99				
30								Total Depth 30' No caving observed No groundwater encountered Backfilled with cuttings.	
705									
35									
700									

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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-111

Page Number: 1

Date(s) Excavated 9/9/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 737½'±
Excavation Dimension 8"	Equipment Contractor J & H Drilling	Equipment Type LAR	Hammer Data Manual 30" Drop, #140

Elevation	Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
	0								ASPHALTIC CONCRETE (2") ON AGGREGATE BASE (4")	
		■					SC		ALLUVIUM: Yellowish brown clayey fine SAND (moist, very dense)	
735			■		10.8	113				
		■		100			CL		Brown silty CLAY, trace fine sand (moist, hard).	
	5		■	79	10.1	98	SC		Yellowish brown clayey fine SAND (damp, very dense).	
730			■	90	11.4	100	CL		Yellowish brown silty CLAY (moist, hard). Common calcium carbonate veinlets.	
	10		■	100	16.4	108				
725							SM		Light yellowish brown silty fine SAND (damp, very dense).	
			■	68	6.2	107				
	15						CL		Yellowish brown silty CLAY (moist, hard). Common calcium carbonate veinlets.	
720										
			■	80	16.8	105			At 19'; some calcium carbon masses.	
	20									
715										
	25		■	97	18.5	107	CL		Brown silty CLAY (moist, hard).	
710										
	30								Total Depth 25' No caving observed No groundwater encountered Backfilled with cuttings. Topped with cold patch.	
705										
	35									
700										

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Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-112

Page Number: 1

Date(s) Excavated 9/9/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation 737½'±
Excavation Dimension 8"	Equipment Contractor J & H Drilling	Equipment Type LAR	Hammer Data Manual 30" Drop, #140

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0						CL	▨	ALLUVIUM: Brown silty CLAY, trace fine sand (damp, hard).	
	■						▨		
735		■	87	12.7	101		▨		
	■	◣	9/ 15/ 12			CL	▨	Yellowish brown silty CLAY, trace fine sand (damp, very stiff).	
5							▨		
730		■	56	10.8	96		▨	Below 7'; common calcium carbonate veinlets.	
		◣	15/ 17/ 19				▨	At 9'; becoming moist, hard.	
10							▨		
725		■	40	11.6	93		▨	At 12'; becoming damp.	
		◣	15/ 14/ 13				▨	At 14'; becoming moist, very stiff.	
15							▨		
720		■	40/ 9"	15.0	97		▨		
		◣	16/ 18/ 21				▨	At 19'; becoming hard.	
20							▨		
715		■	40/ 9"	15.8	108		▨		
						SC	░	Brown clayey fine SAND (moist, dense).	
		◣	15/ 27/ 50			CL	▨	Brown silty CLAY (moist, hard).	
25							▨		
						SC/ CL	░	Brown clayey fine SAND to fine sandy CLAY (moist, dense to stiff).	
710		■	40/ 9"	10.7	106		░		G:S:M:C 1:46:32:21
		◣	9/ 14/ 21			CL	▨	Brown silty CLAY (very moist, hard).	
30						SC	░	Brown clayey fine to coarse SAND (moist, dense).	
						CL	▨	Grayish brown silty CLAY (wet, hard).	
705		■	40/ 9"	22.6	103		▨		
		◣	12/ 12/ 12				▨	At 34'; becoming very stiff.	
35							▨		
700		■	40/ 9"	25.2	98		▨	At 37'; groundwater.	
		◣					▨		

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SOCES

Work Order: 2880-29-2-100

SUBSURFACE LOG

Excavation
Number: B-112

Page Number: 2

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
40		▲	10/ 19/ 50			SC	▨	Gray clayey fine SAND (saturated, very dense).	
						CL	▨	Gray silty CLAY (saturated, hard).	
695		■	40/ 9"	18.0	106				
						SC	▨	Yellowish brown clayey fine to coarse SAND, some fine to coarse gravel (saturated, dense to very dense).	
		▲	29/ 50/						
45			50			SC	▨	Yellowish brown clayey fine SAND (saturated, very dense).	
						SM	▥	Yellowish brown silty fine SAND (saturated, very dense).	
690		■	75/ 9"	17.5	118				
		▲	50/ 44/						
50			30			CL	▨	Yellowish brown silty CLAY (saturated, hard).	
685								Total Depth 51½' No caving observed Groundwater at 37' Backfilled with cuttings.	
55									
680									
60									
675									
65									
670									
70									
665									
75									
660									
80									
655									

Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

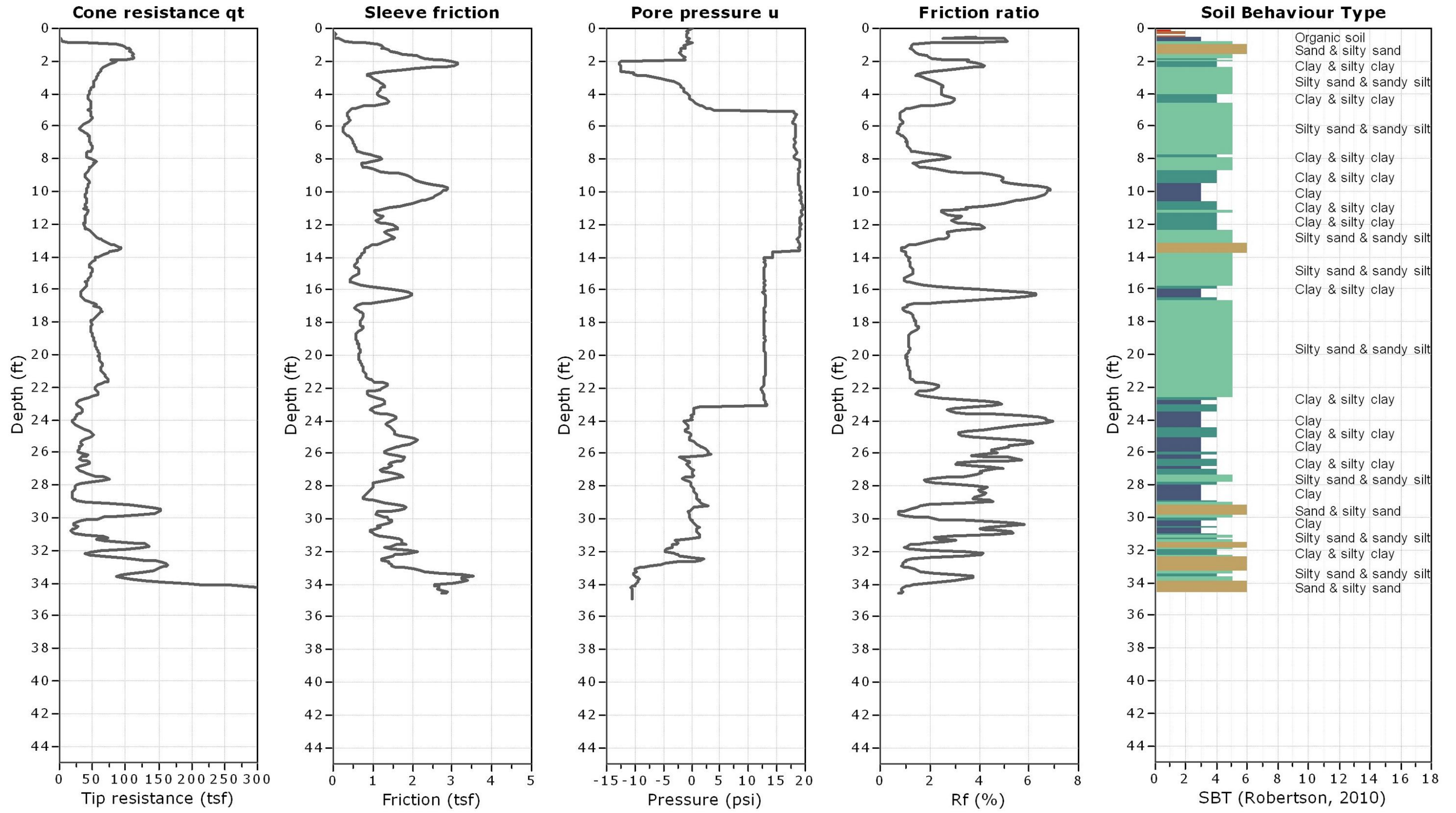
CPT: CPT-1

Total depth: 34.95 ft, Date: 6/8/2015

Cone Type: Vertek

Project: **Gorian & Associates, Inc.**

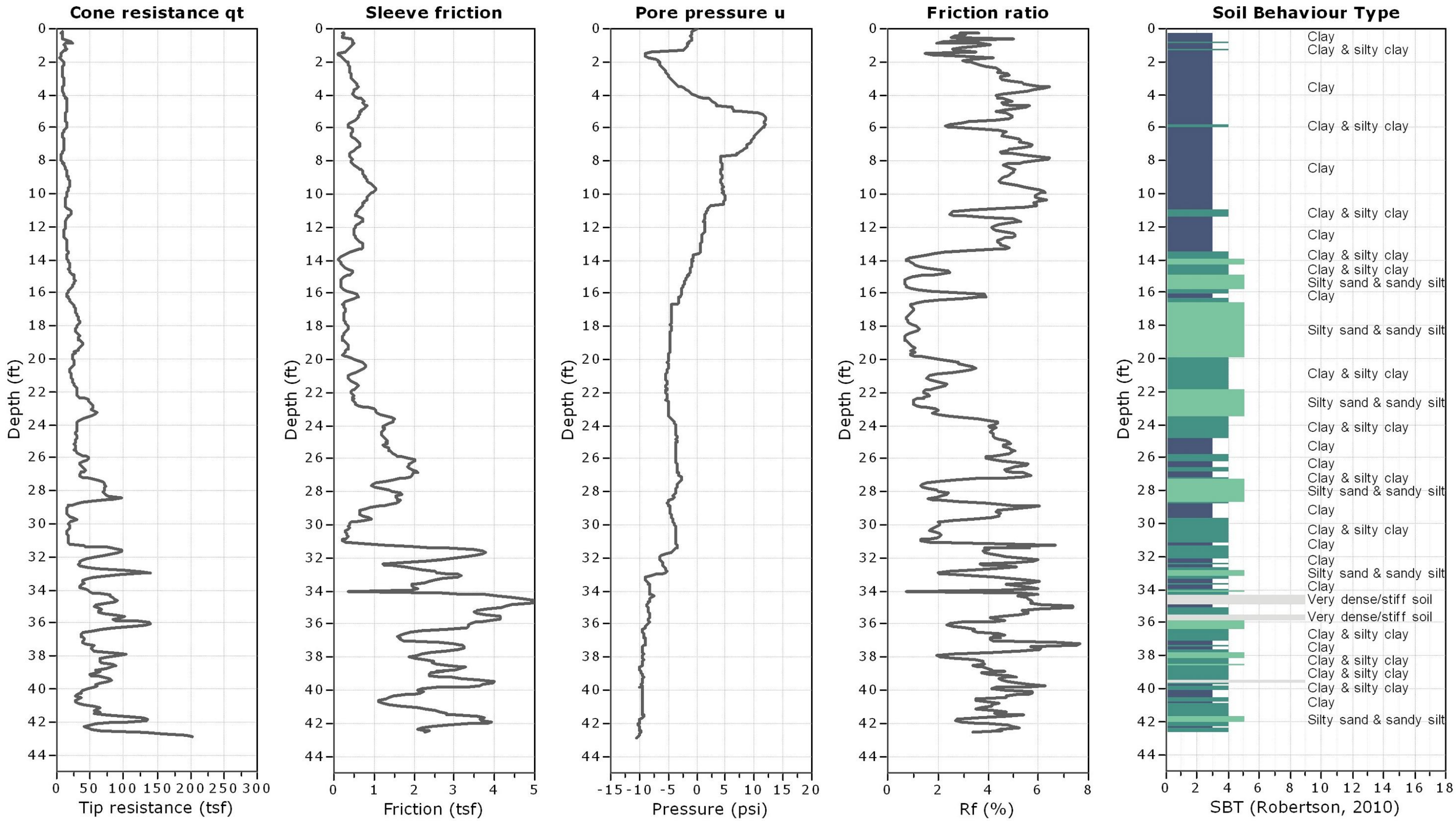
Location: **18605 Erwin St Reseda, CA**



Kehoe Testing and Engineering
714-901-7270
rich@kehoetesting.com
www.kehoetesting.com

Project: **Gorian & Associates, Inc.**
Location: **18605 Erwin St Reseda, CA**

CPT: CPT-2
Total depth: 42.87 ft, Date: 6/8/2015
Cone Type: Vertek



APPENDIX B

LABORATORY TESTING

General

Laboratory test results on selected samples are presented below. Test were performed to evaluate the physical and engineering properties of the encountered earth materials, including in-situ moisture and dry density, compaction characteristics, expansion potential, consolidation characteristics and shear strength parameters. R-Value and soil corrosivity testing were performed under subcontract by a testing laboratory and corrosion engineer, respectively.

Field Density and Moisture Tests

In-situ dry density and moisture content were determined from the relatively undisturbed drive samples obtained during exploratory operations. The test results and a detailed description of the earth materials encountered are shown on the attached Logs of Subsurface Data, Appendix A.

Soil Expansion Test

Expansion Index tests were performed on selected bulk samples of the encountered materials. The results are as follows:

Sample	Expansion Index	Expansion Index Range	Expansion Potential
B-1 @ 1’	53	51 - 90	Medium
B-100 @ 1’	70	51 - 90	Medium
B-109 @ 1’	59	51 - 90	Medium

Optimum Moisture-Maximum Density Curve

Maximum density/optimum moisture tests (compaction characteristics) were performed on selected bulk samples of the encountered materials. The results are as follows:

Sample	Visual Soil Classification	Maximum Dry Density (pcf)	Optimum Moisture Content (%)
B-1 @ 5-6’	Silty fine sand	123.4	9.6
B-101 @ 6’	Yellow brown silty clay	115.7	12.7
B-105 @ 1’	Brown silty clay	116.3	12.8

Direct Shear Tests

Strain controlled direct shear testing was performed on seven relatively undisturbed samples and three remolded sample sets. The sample sets were saturated prior to shearing under axial loads ranging from 920 to 3,680 psf. The shear strength results are presented as graphic summaries.

Load Consolidation Testing

Load consolidation tests were conducted on twelve relatively undisturbed drive samples. Test loads were added in increments to a maximum of 8,000 psf. Water was added at the approximate overburden pressure to study the effect of moisture infiltration on potential consolidation behavior. The consolidation results are presented on the attached figures as graphic summaries.

Grain Size Distribution

Grain size distribution analyses were performed on several bulk soil samples. The grain size was evaluated by hydrometer analysis. Hydrometer analyses were performed using a 50-gram sample. A table summarizing the results is presented below.

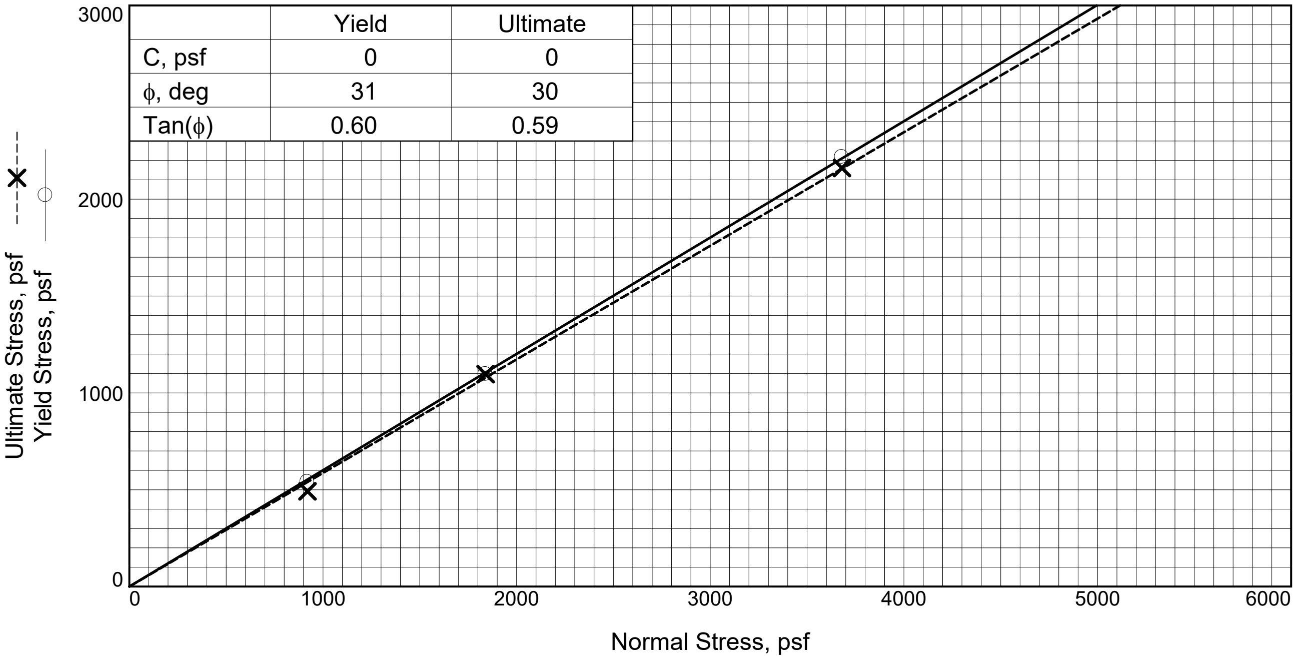
HYDROMETER RESULTS						
Boring	**Depth (feet)**	**% Sand**	**% Silt**	**% Clay**	**% Fines (silt and clay)**	**Classification**
B-1	5	65	18	17	35	SM
B-1	15	95	2	3	5	SP
B-2	3	44	22	34	56	CL
B-2	33	20	40	40	80	ML/CL
B-100	17½	26	52	22	74	ML
B-104	15	54	29	17	46	SM/SC
B-104	30	62	28	10	38	SM
B-106	15	65	26	9	35	SM
B-109	20	29	47	24	71	ML/CL
B-112	27	47	32	21	53	SC/CL

R-Value Determination

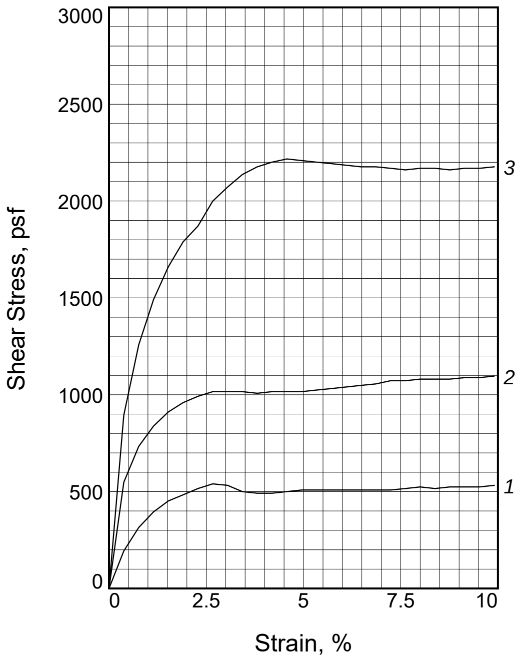
An R-Value determination was conducted by a subcontractor on a composite of the soils encountered in the proposed pavement area. The test was performed in general accordance with the California State Test Method No. 301-F. An R-Value of 11 is indicated. The test results are attached.

Corrosion Testing

Several soil samples were sent under separate contract to be tested for corrosive properties. The test results are attached.



	Yield	Ultimate
C, psf	0	0
ϕ, deg	31	30
Tan(ϕ)	0.60	0.59



Sample No.		1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
Normal Stress, psf		920	1840	3680
Yield Stress, psf		540	1096	2217
Strain, %		2.7	9.9	4.6
Ultimate Stress, psf		492	1096	2161
Strain, %		4.2	9.9	7.6
Strain rate, in./min.		0.02	0.02	0.02

Sample Type: "undisturbed"

Description:

Specific Gravity=

Remarks:

Figure ________

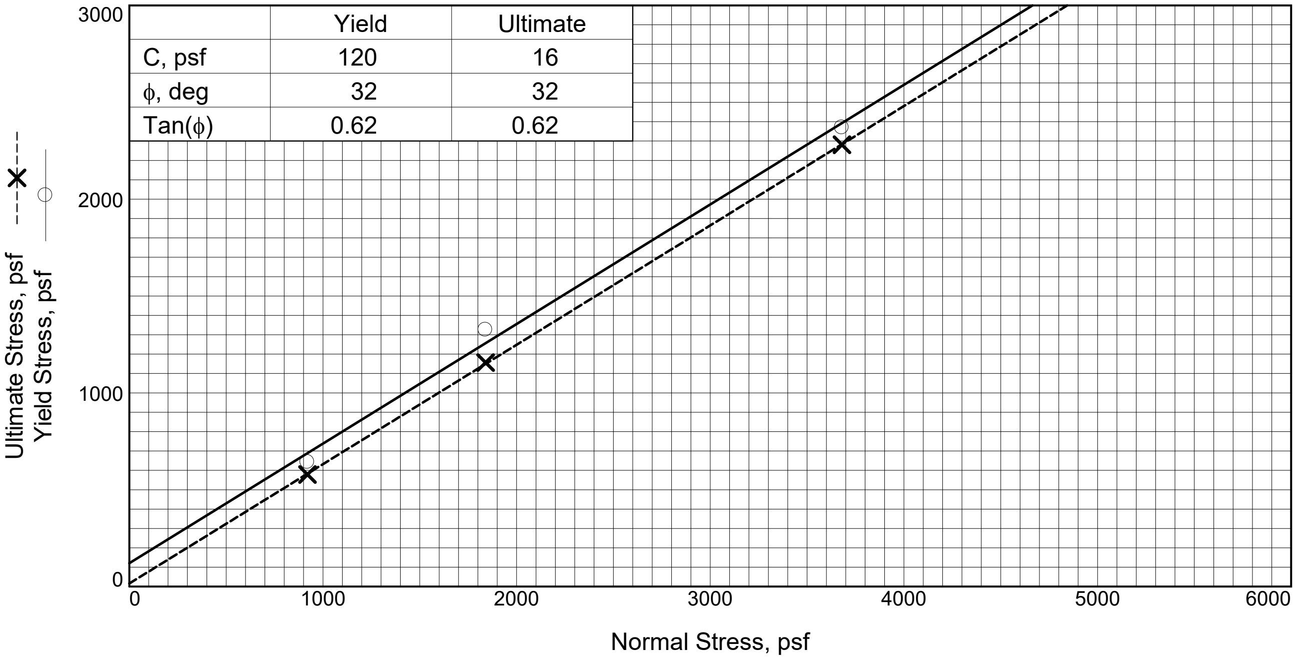
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

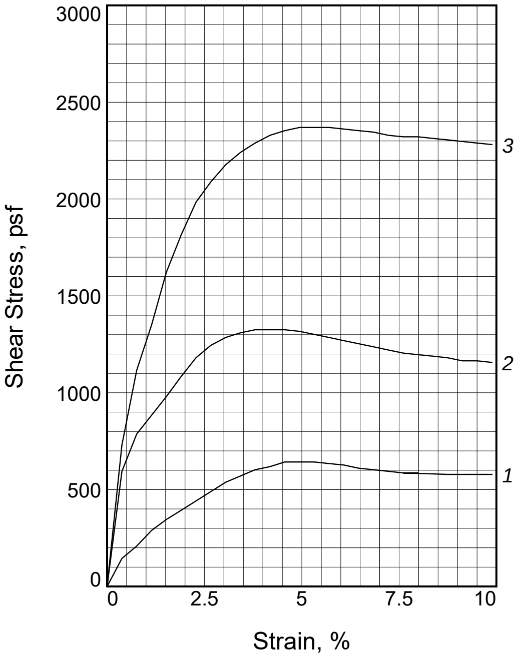
Sample Number: B-1 **Depth:** 8'

Proj. No.: 2880-29-0-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	120	16
ϕ, deg	32	32
Tan(ϕ)	0.62	0.62



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	643	1325	2369
	Strain, %	5.3	4.2	5.7
	Ultimate Stress, psf	578	1157	2281
	Strain, %	9.9	9.9	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed

Description:

Specific Gravity=

Remarks:

Figure ________

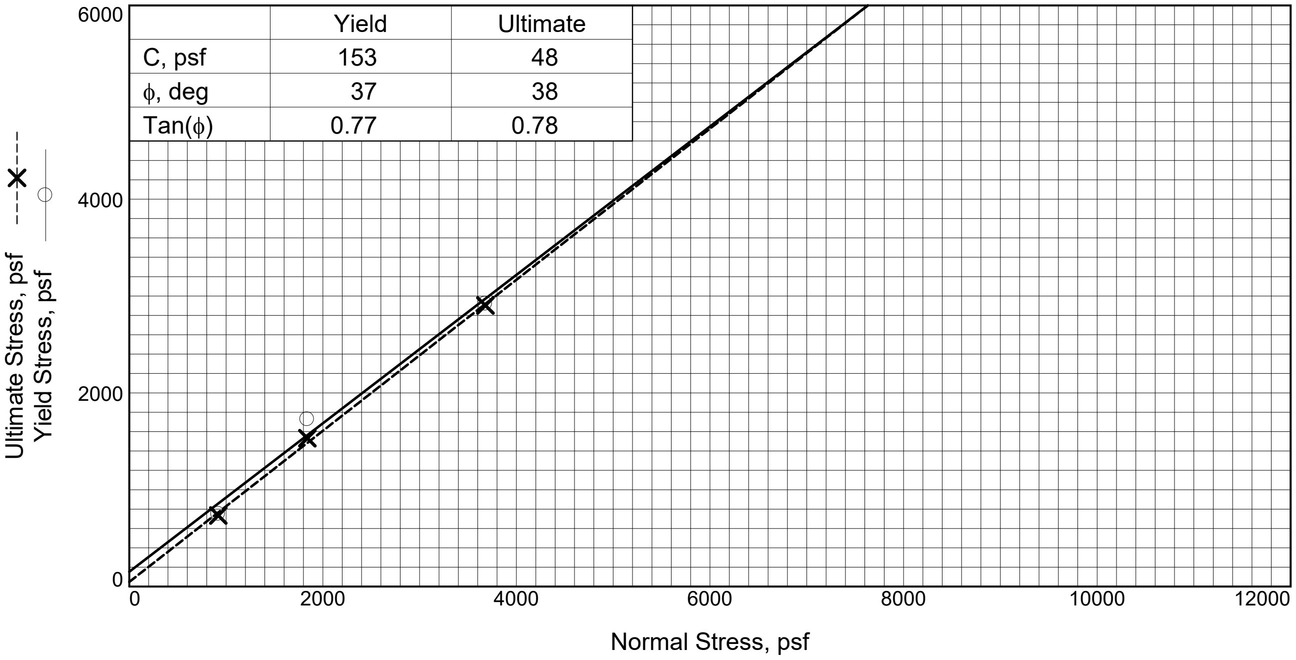
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

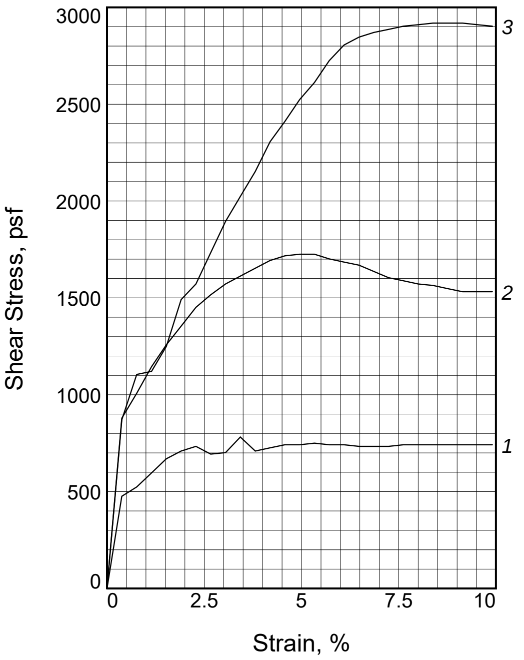
Sample Number: B-2 @ 8'

Proj. No.: 2880-29-0-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	153	48
ϕ, deg	37	38
Tan(ϕ)	0.77	0.78



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	750	1725	2919
	Strain, %	5.3	5.3	8.8
	Ultimate Stress, psf	734	1532	2902
	Strain, %	7.2	9.5	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: remolded

Description:

Specific Gravity=

Remarks:

Figure ________

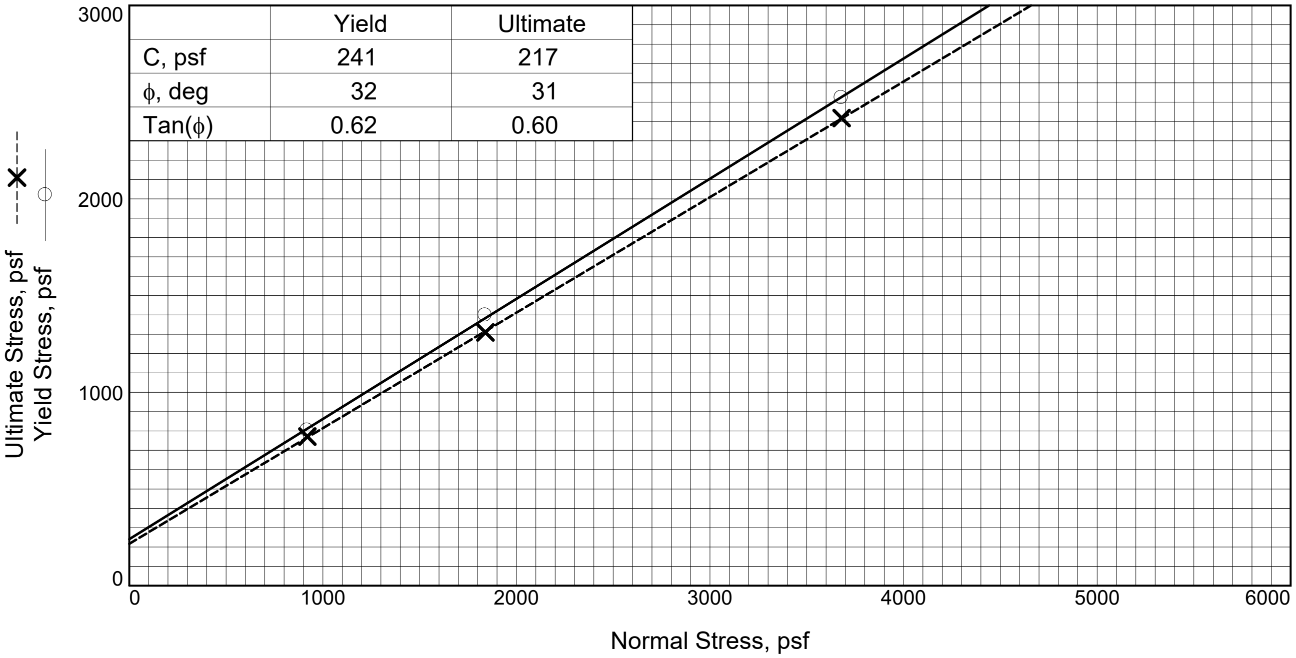
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

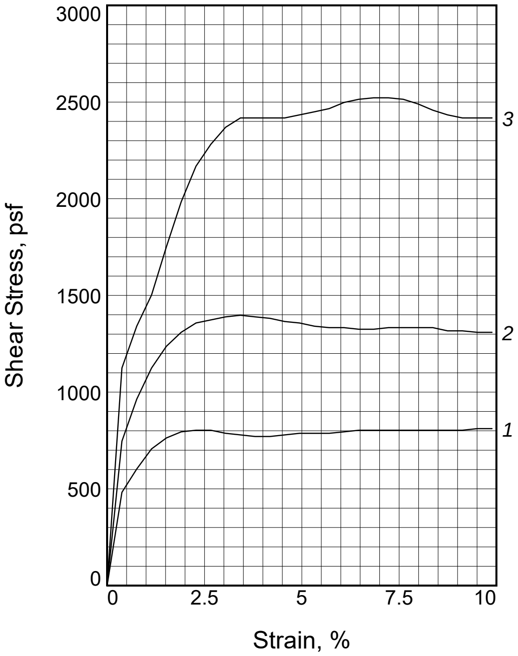
Sample Number: B-1 **Depth:** 5'

Proj. No.: 2880-29-0-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	241	217
ϕ, deg	32	31
Tan(ϕ)	0.62	0.60



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	803	1398	2522
	Strain, %	2.7	3.4	7.2
	Ultimate Stress, psf	771	1309	2418
	Strain, %	4.2	9.9	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed
Description:

Specific Gravity=
Remarks:

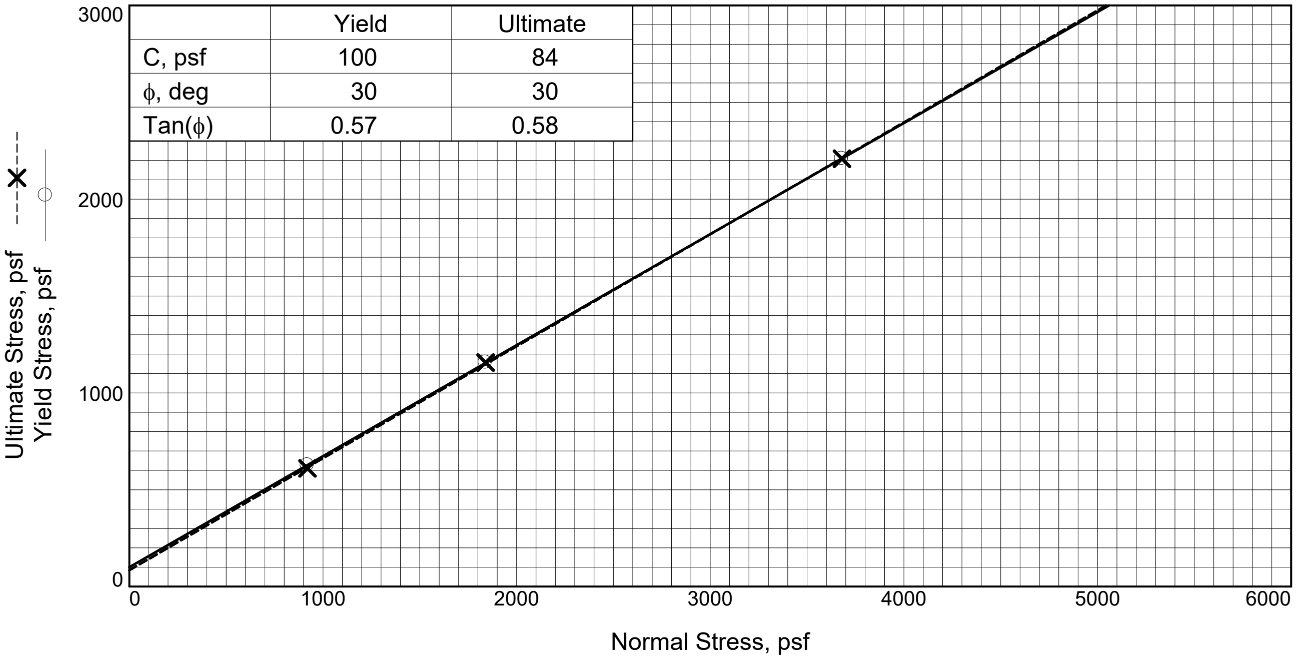
Figure ________

Client: LAUSD

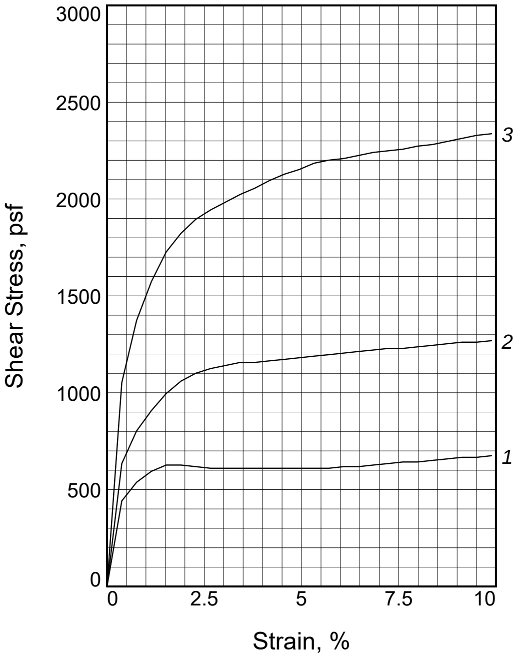
Project: Los Angeles Unified School District
SOCES
Sample Number: B-101 **Depth:** 5'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	100	84
ϕ, deg	30	30
Tan(ϕ)	0.57	0.58



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	626	1157	2209
	Strain, %	1.9	3.8	6.1
	Ultimate Stress, psf	610	1157	2209
	Strain, %	5.7	3.8	6.1
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed

Description:

Specific Gravity=

Remarks:

Figure ________

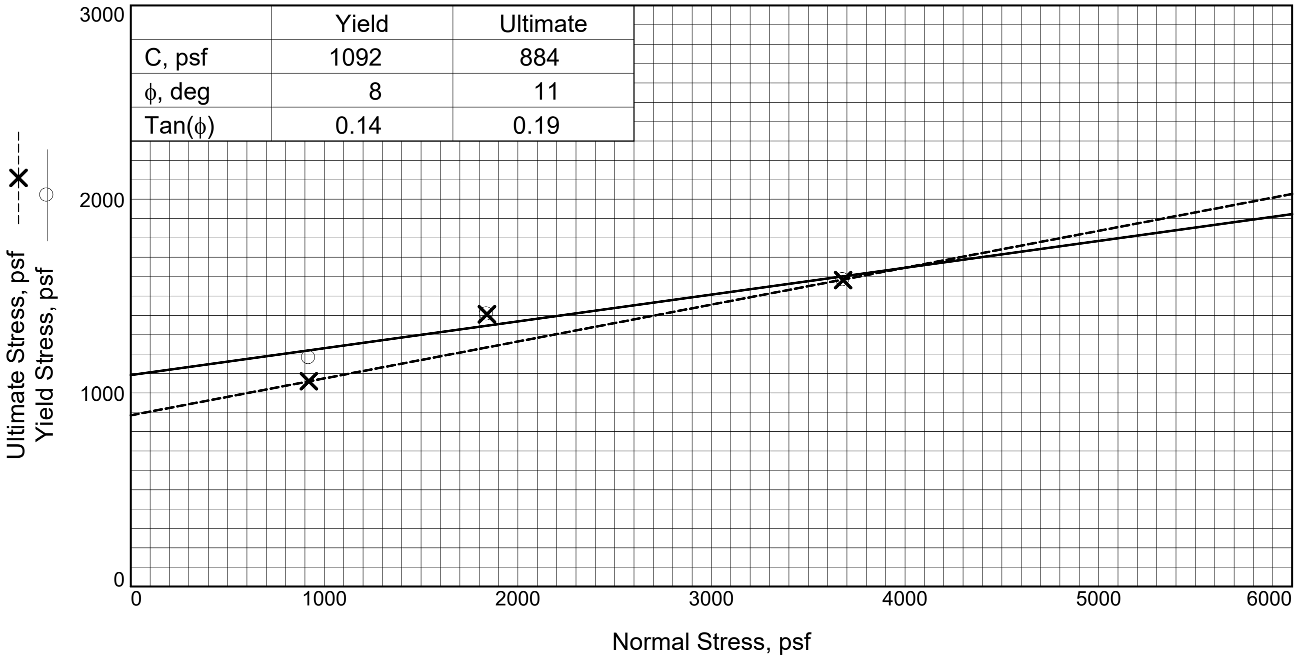
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

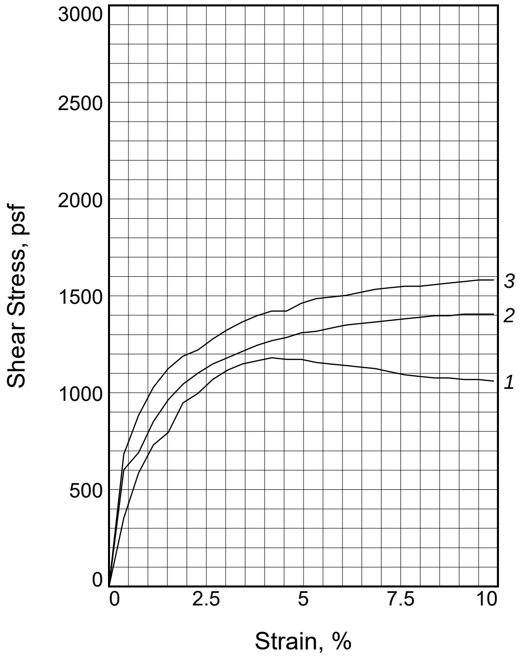
Sample Number: B-103 **Depth:** 5'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	1092	884
ϕ, deg	8	11
Tan(ϕ)	0.14	0.19



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	1181	1406	1582
	Strain, %	4.2	9.1	9.9
	Ultimate Stress, psf	1060	1406	1582
	Strain, %	9.9	9.9	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed
Description:

Specific Gravity=
Remarks:

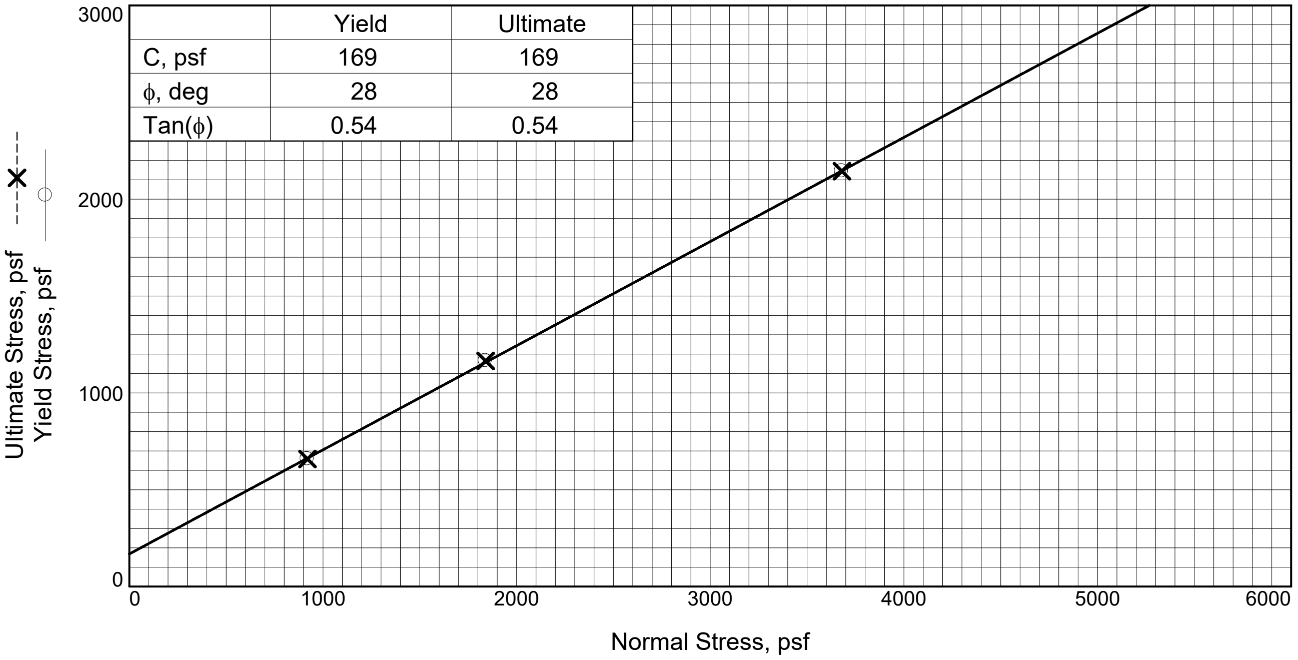
Figure ________

Client: LAUSD

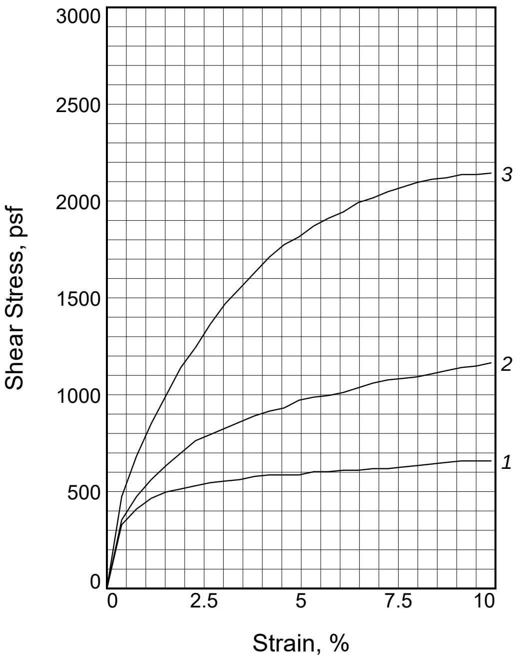
Project: Los Angeles Unified School District
SOCES
Sample Number: B-105 **Depth:** 10'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	169	169
ϕ, deg	28	28
Tan(ϕ)	0.54	0.54



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	659	1165	2144
	Strain, %	9.9	9.9	9.9
	Ultimate Stress, psf	659	1165	2144
	Strain, %	9.9	9.9	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed

Description:

Specific Gravity=

Remarks:

Figure ________

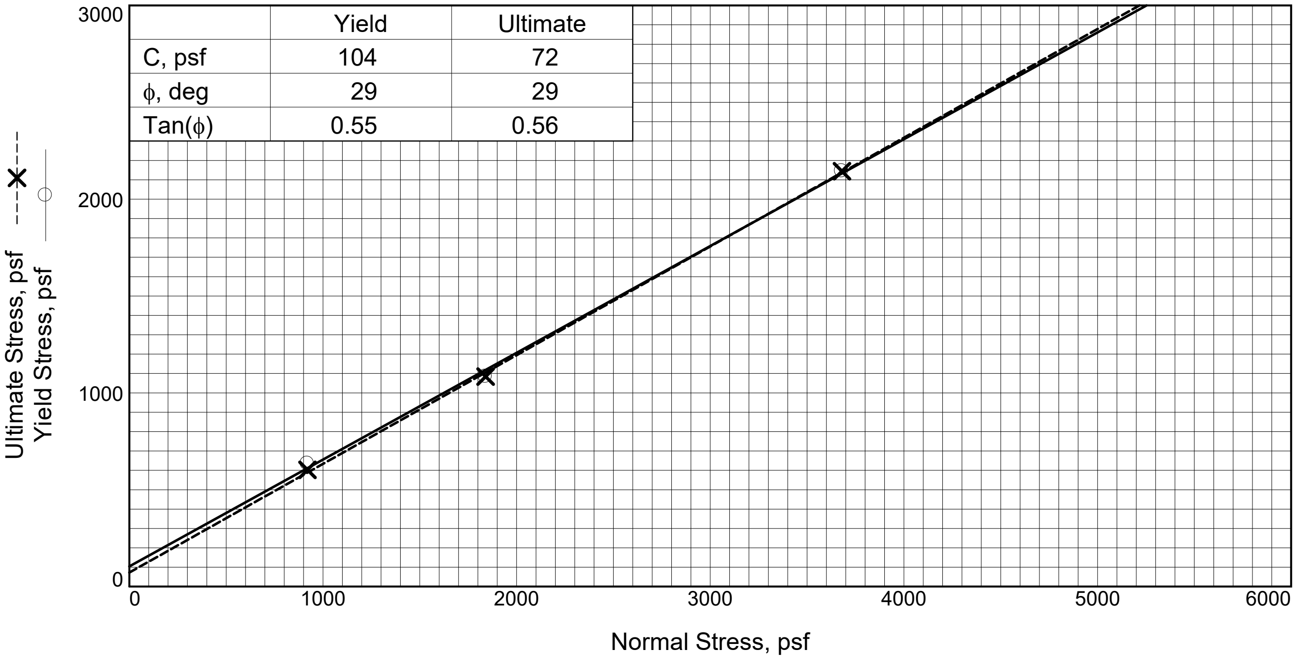
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

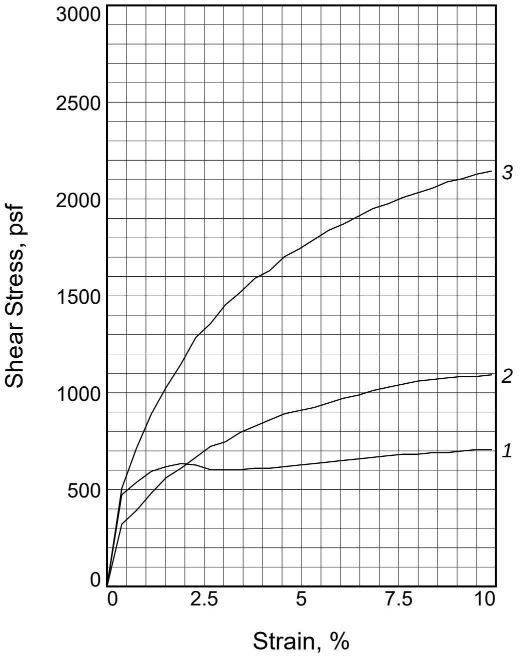
Sample Number: B-111 **Depth:** 4'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	104	72
ϕ, deg	29	29
Tan(ϕ)	0.55	0.56



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	634	1084	2144
	Strain, %	1.9	9.5	9.9
	Ultimate Stress, psf	602	1084	2144
	Strain, %	3.4	9.5	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Undisturbed

Description:

Specific Gravity=

Remarks:

Figure ________

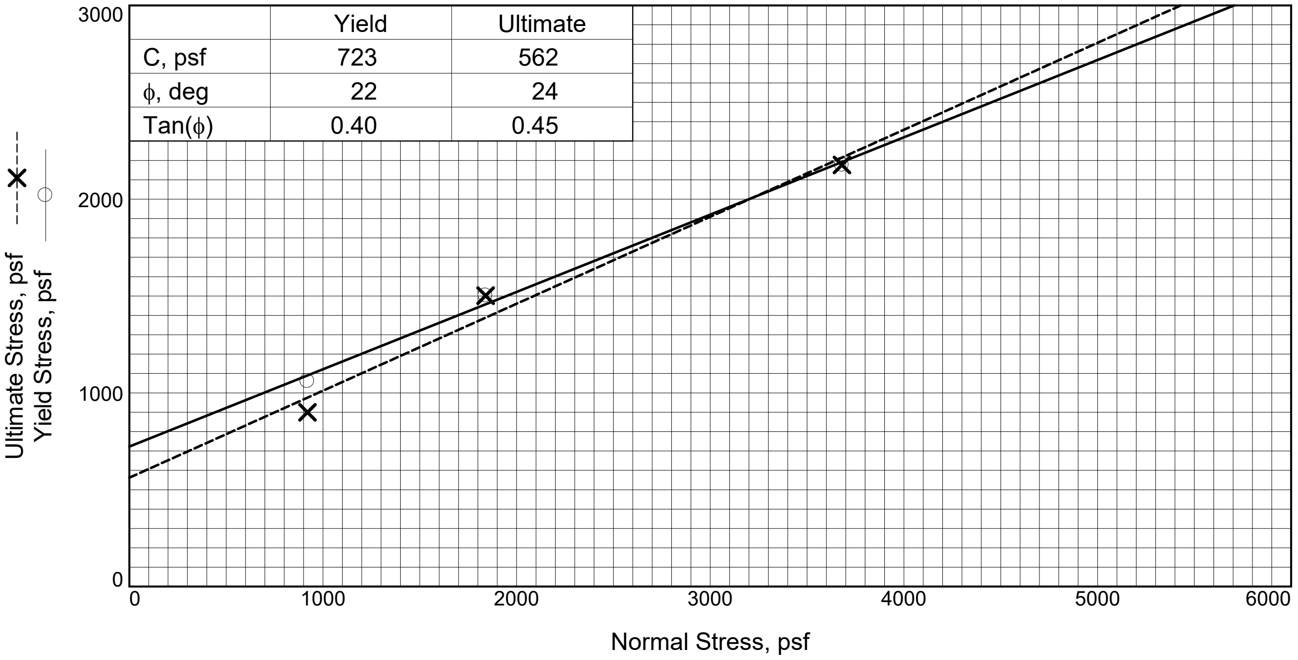
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

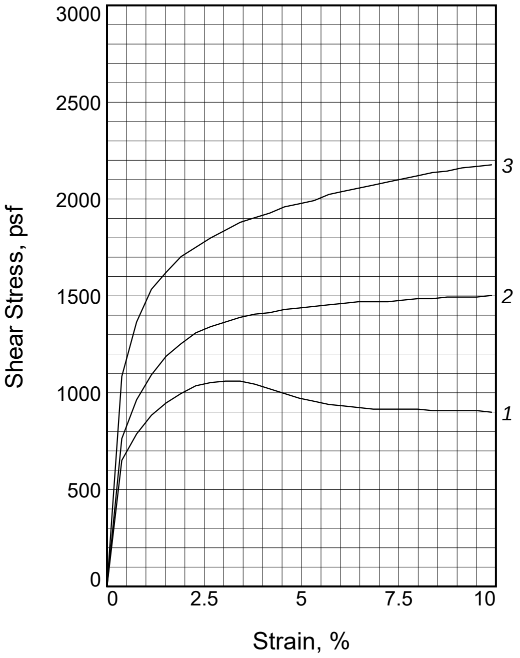
Sample Number: B-112 **Depth:** 7'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	723	562
ϕ, deg	22	24
Tan(ϕ)	0.40	0.45



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	1060	1502	2177
	Strain, %	3.4	9.9	9.9
	Ultimate Stress, psf	900	1502	2177
	Strain, %	9.9	9.9	9.9
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Remolded

Description:

Specific Gravity=

Remarks:

Figure ________

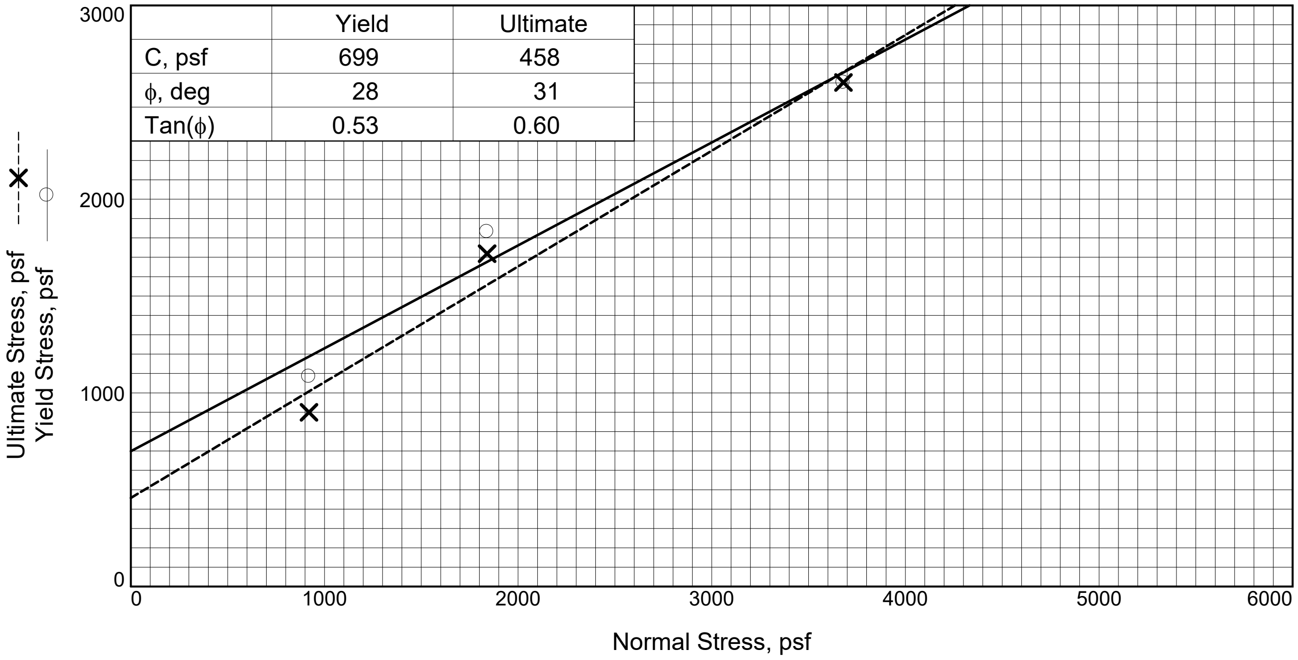
Client: LAUSD

Project: Los Angeles Unified School District
SOCES

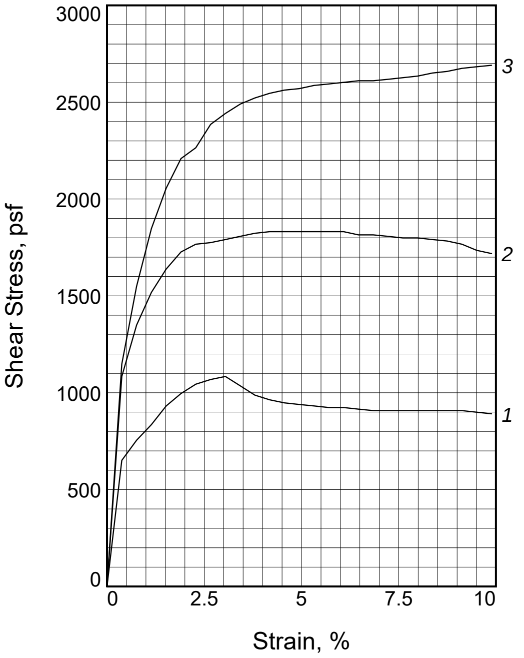
Sample Number: B-101 **Depth:** 6'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA



	Yield	Ultimate
C, psf	699	458
ϕ, deg	28	31
Tan(ϕ)	0.53	0.60



	Sample No.	1	2	3
Initial	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf	N/A	N/A	N/A
	Saturation, %	N/A	N/A	N/A
	Void Ratio	N/A	N/A	N/A
	Diameter, in.	2.63	2.63	2.63
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	N/A	N/A	N/A
	Dry Density, pcf			
	Saturation, %			
	Void Ratio			
	Diameter, in.			
	Height, in.			
	Normal Stress, psf	920	1840	3680
	Yield Stress, psf	1084	1831	2602
	Strain, %	3.0	6.1	6.1
	Ultimate Stress, psf	900	1719	2602
	Strain, %	9.5	9.9	6.1
	Strain rate, in./min.	0.02	0.02	0.02

Sample Type: Remolded

Description:

Specific Gravity=

Remarks:

Figure ________

Client: LAUSD

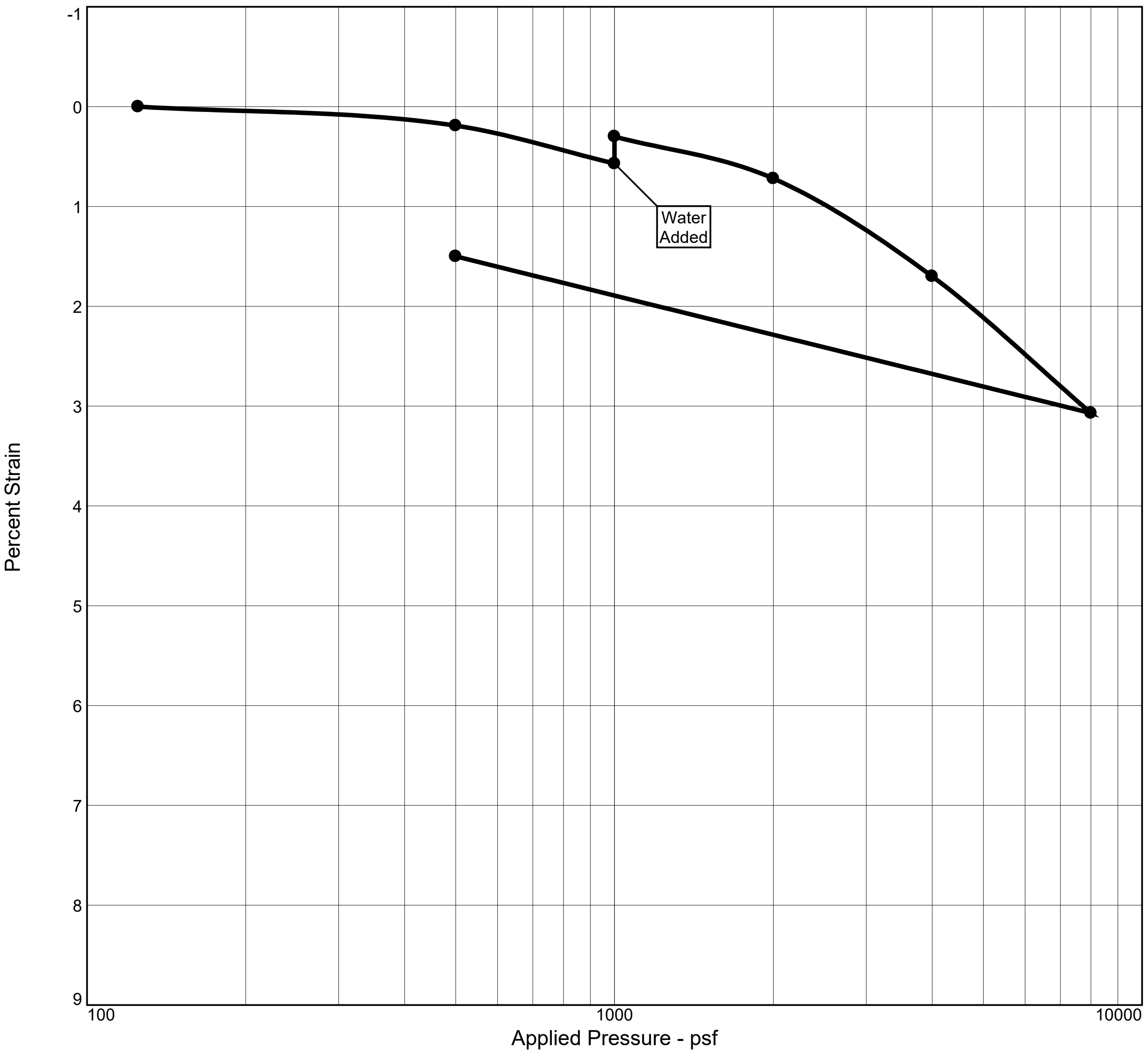
Project: Los Angeles Unified School District
SOCES

Sample Number: B-105 **Depth:** 1'

Proj. No.: 2880-29-2-100 **Date Sampled:**

DIRECT SHEAR TEST REPORT
Gorian & Associates
Thousand Oaks, CA

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	e_o	Swell Press. (psf)	Swell %	C_r
Sat.	Moist.									
								1668	0.3	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-0- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 8' **Sample Number:** B-1

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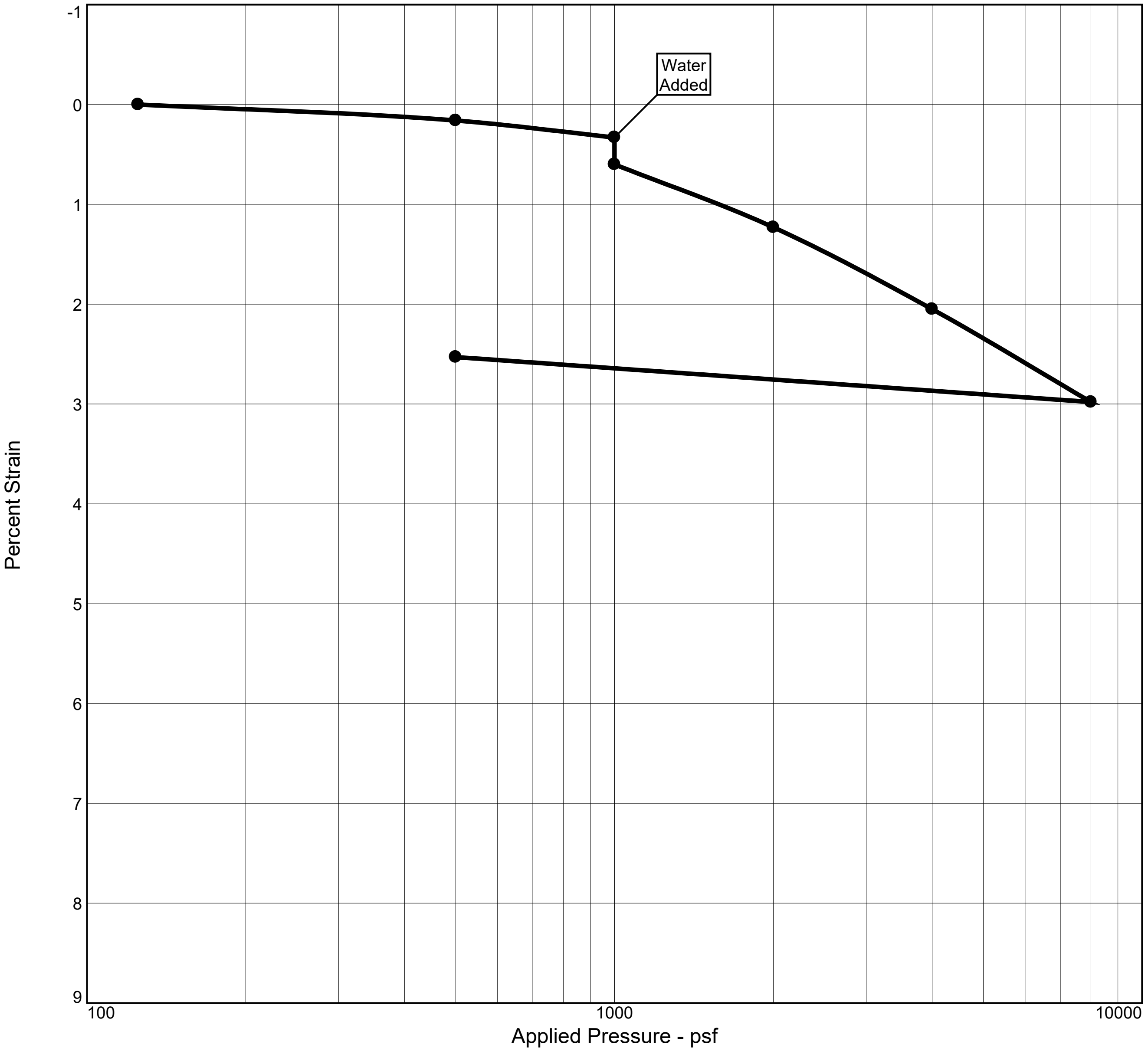
Thousand Oaks, CA

Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	e_o	Swell Press. (psf)	Clpse. %	C_r
Sat.	Moist.									
									0.3	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-0- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 18' **Sample Number:** B-1

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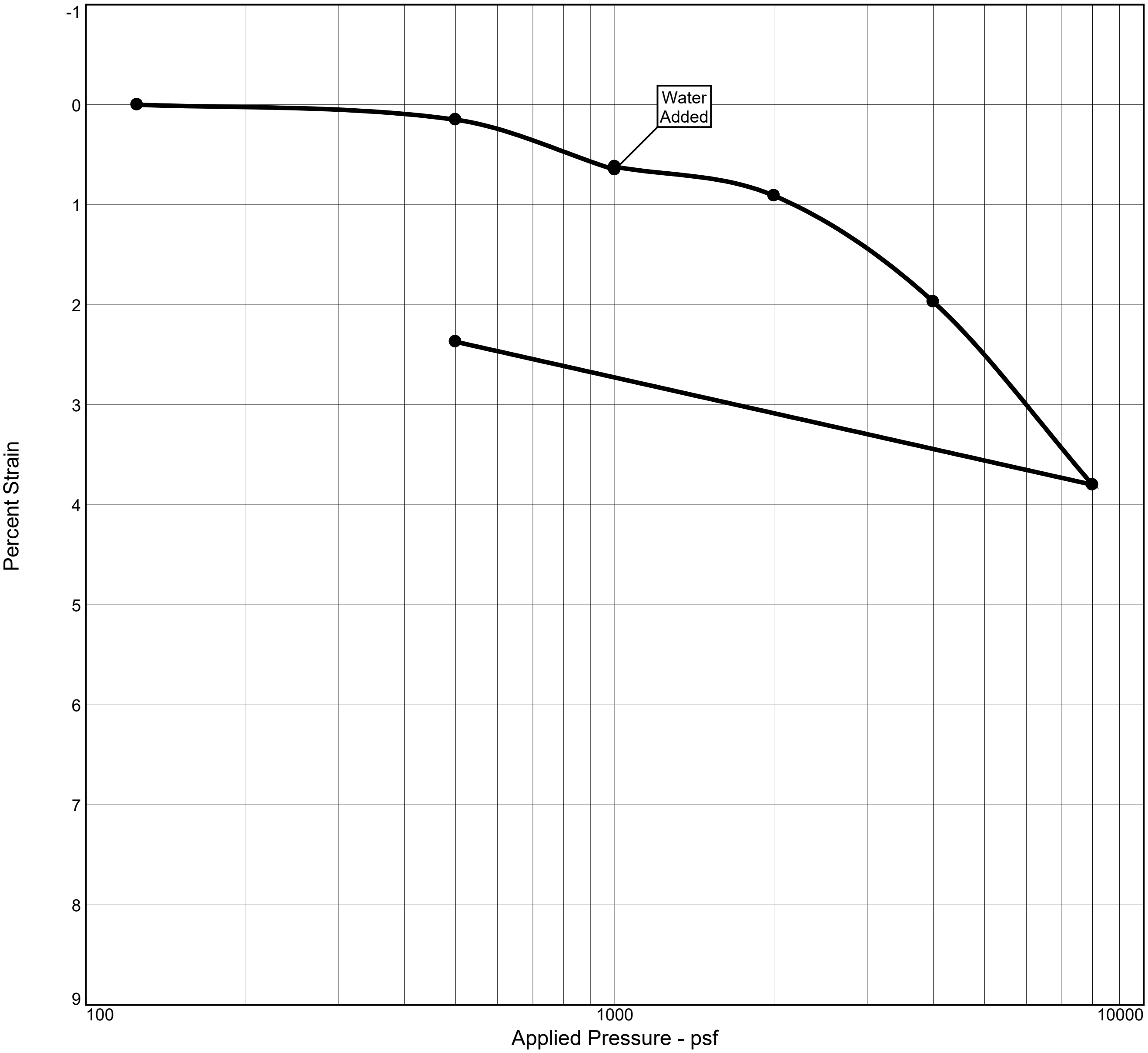
Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	e_o	Swell Press. (psf)	Swell %	C_r
Sat.	Moist.									
								1087	0.0	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-0- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 13' **Sample Number:** B-2

Remarks:

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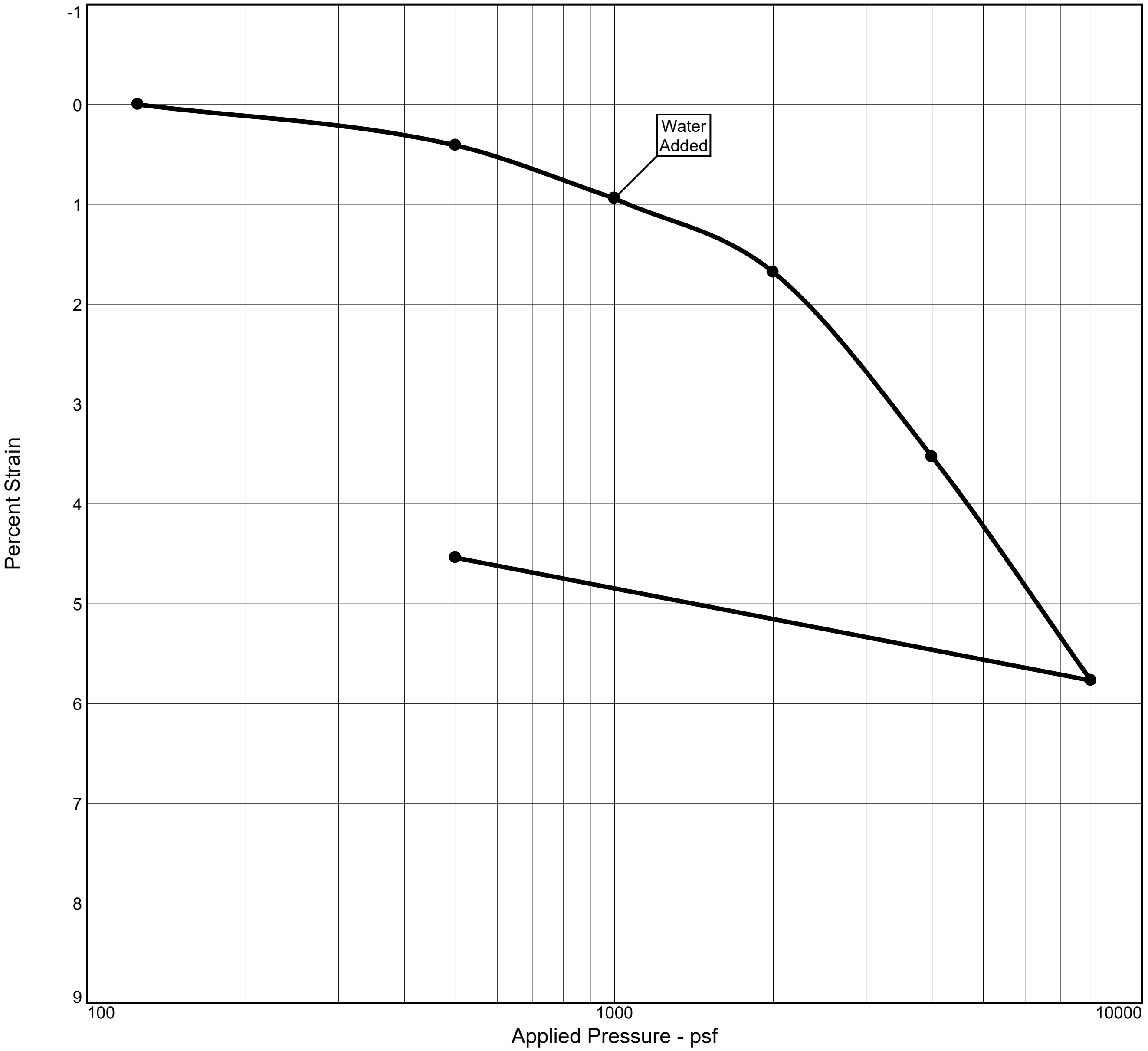
Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_r	Swell Press. (psf)	Swell %	e_o
Sat.	Moist.											
							2281				0.0	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-2- **Client:** LAUSD
Project: SOCES

Sample Number: B-100 @ 25'

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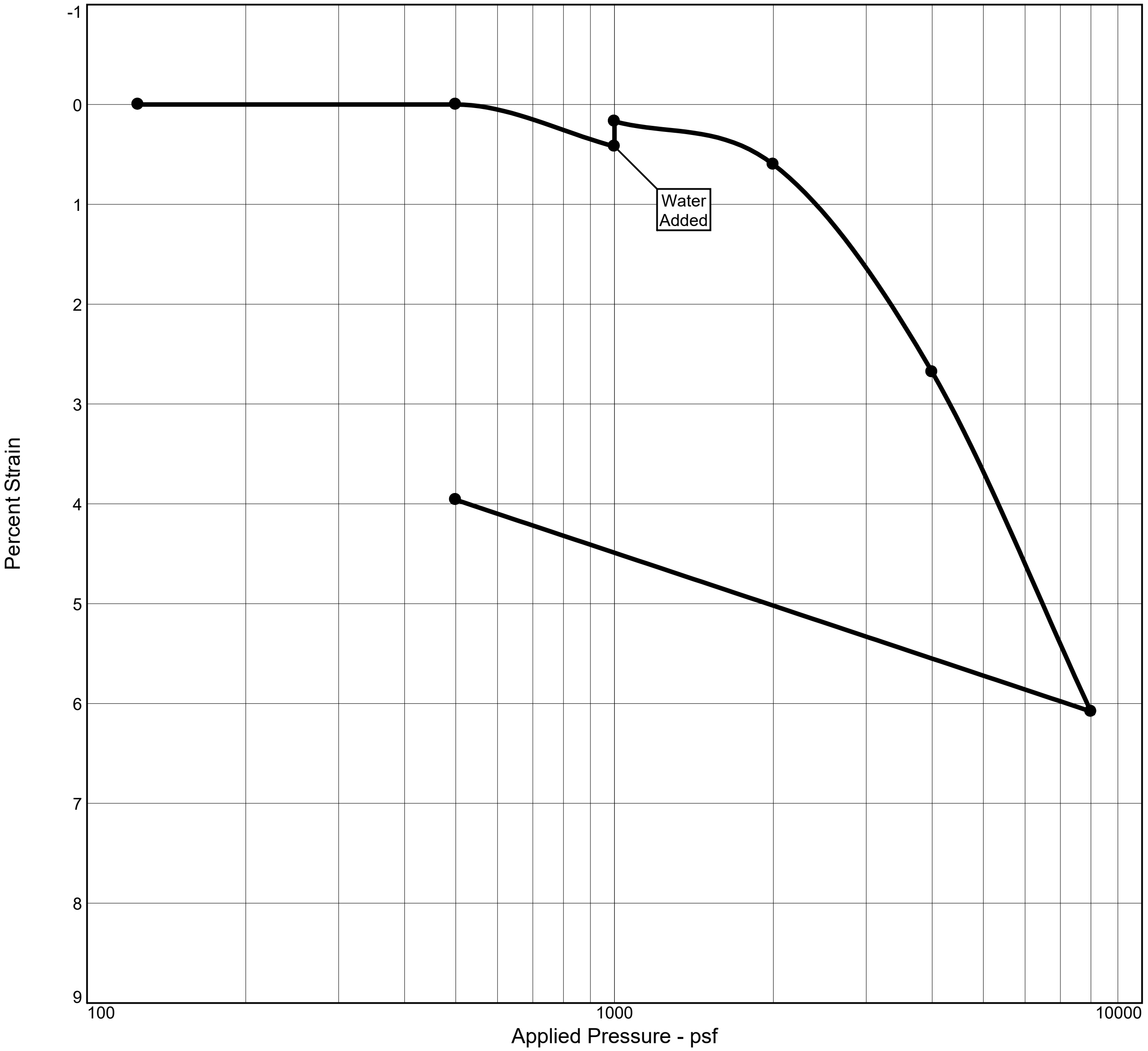
Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_r	Swell Press. (psf)	Swell %	e_o
Sat.	Moist.											
							2778			1754	0.2	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-2- **Client:** LAUSD

Project: SOCES

Sample Number: B-101 @ 7'

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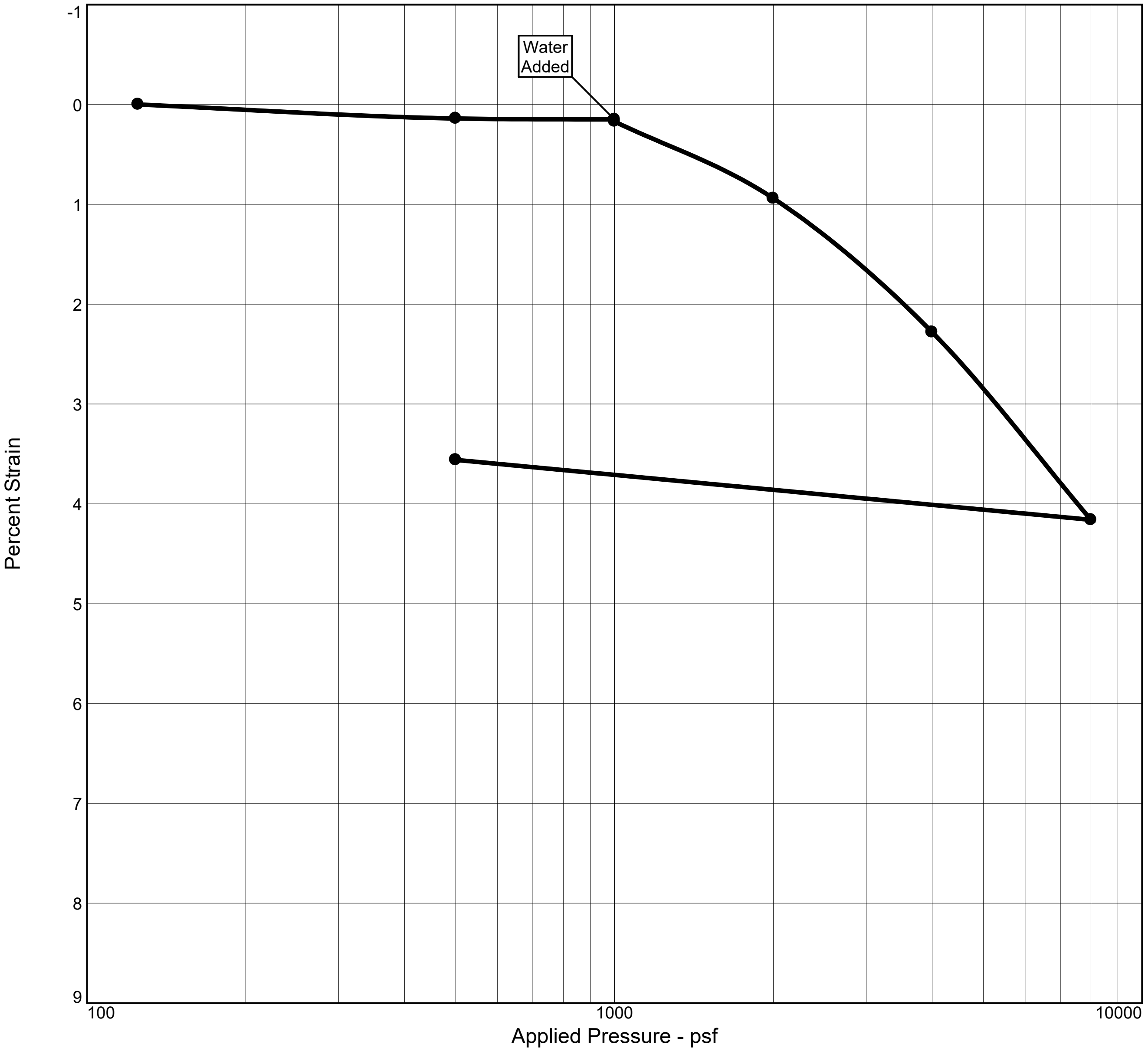
Thousand Oaks, CA

Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_r	Swell Press. (psf)	Clpse. %	e_o
Sat.	Moist.											
							2696				0.0	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-2- **Client:** LAUSD
Project: SOCES

Sample Number: B-104 @ 12½'

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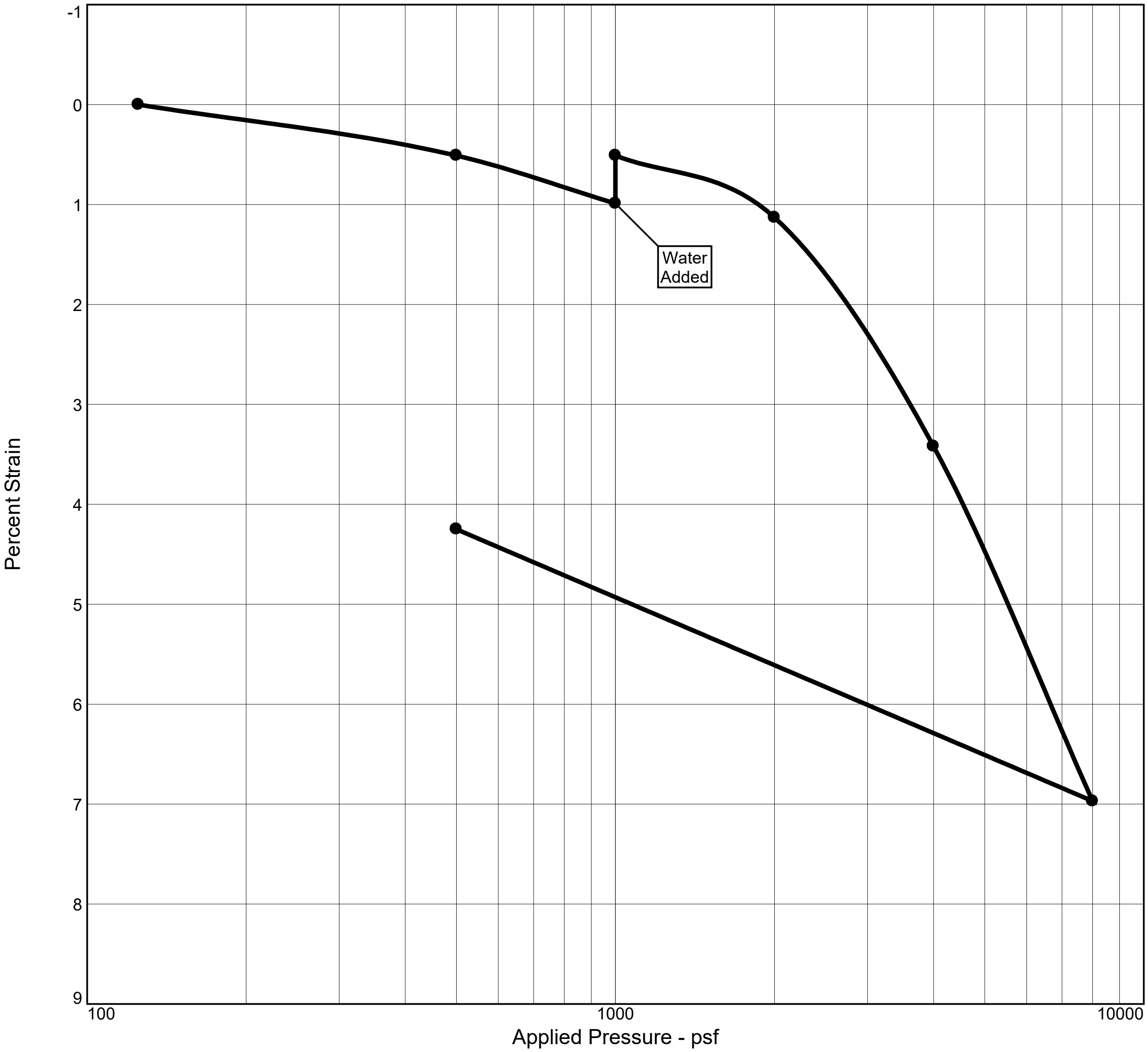
Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	Overburden (psf)	P_c (psf)	C_c	C_r	Swell Press. (psf)	Swell %	e_o
Sat.	Moist.											
							2714			1854	0.5	

MATERIAL DESCRIPTION	USCS	AASHTO

Project No. 2880-29-2- **Client:** LAUSD

Project: SOCES

Sample Number: B-105 @ 7'

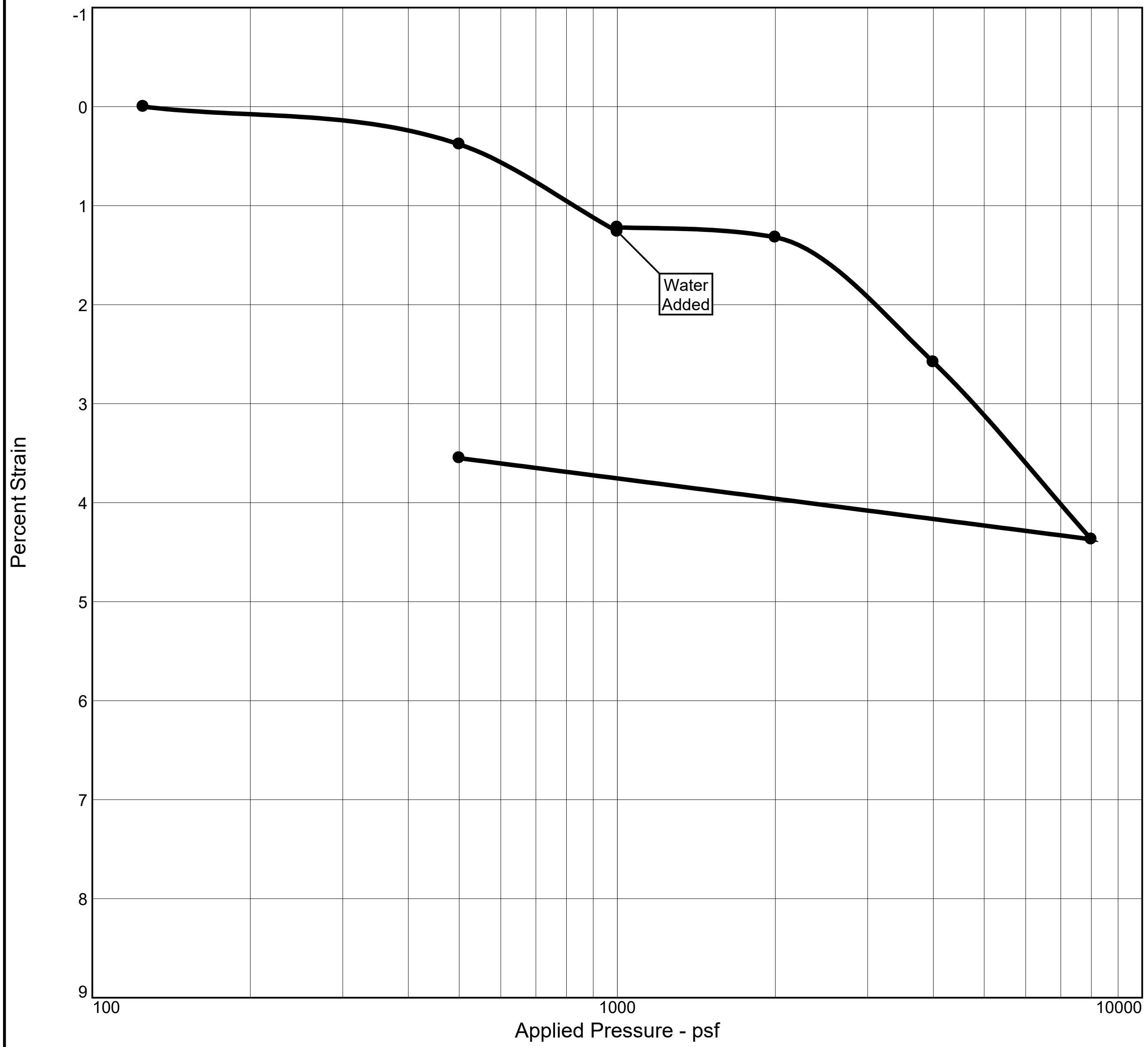
Gorian & Associates

Thousand Oaks, CA

Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							

MATERIAL DESCRIPTION

Project No. 2880-29-2- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 27½' **Sample Number:** B-106

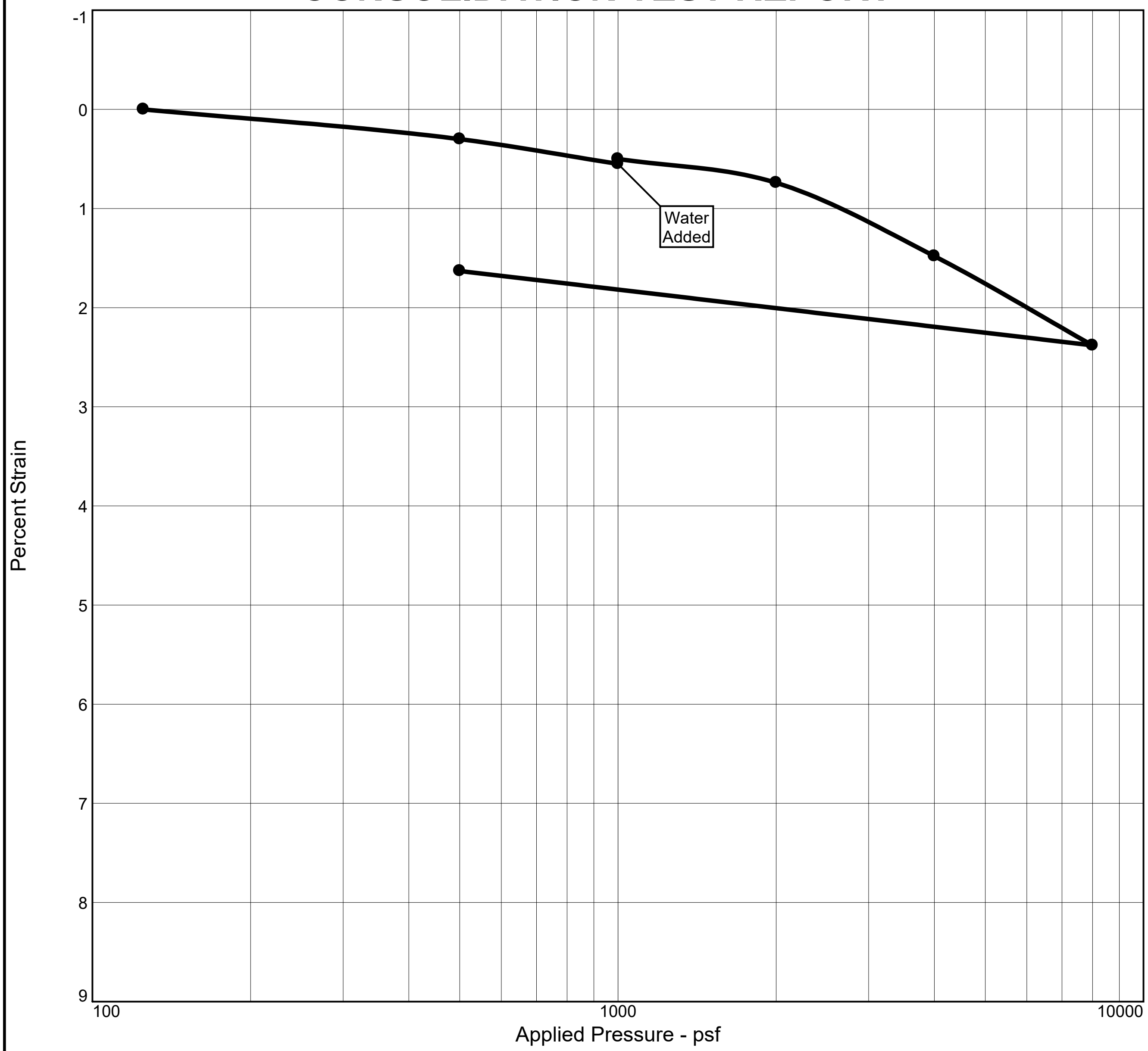
Gorian & Associates

Thousand Oaks, CA

Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							

MATERIAL DESCRIPTION

Project No. 2880-29-2- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 15' **Sample Number:** B-107

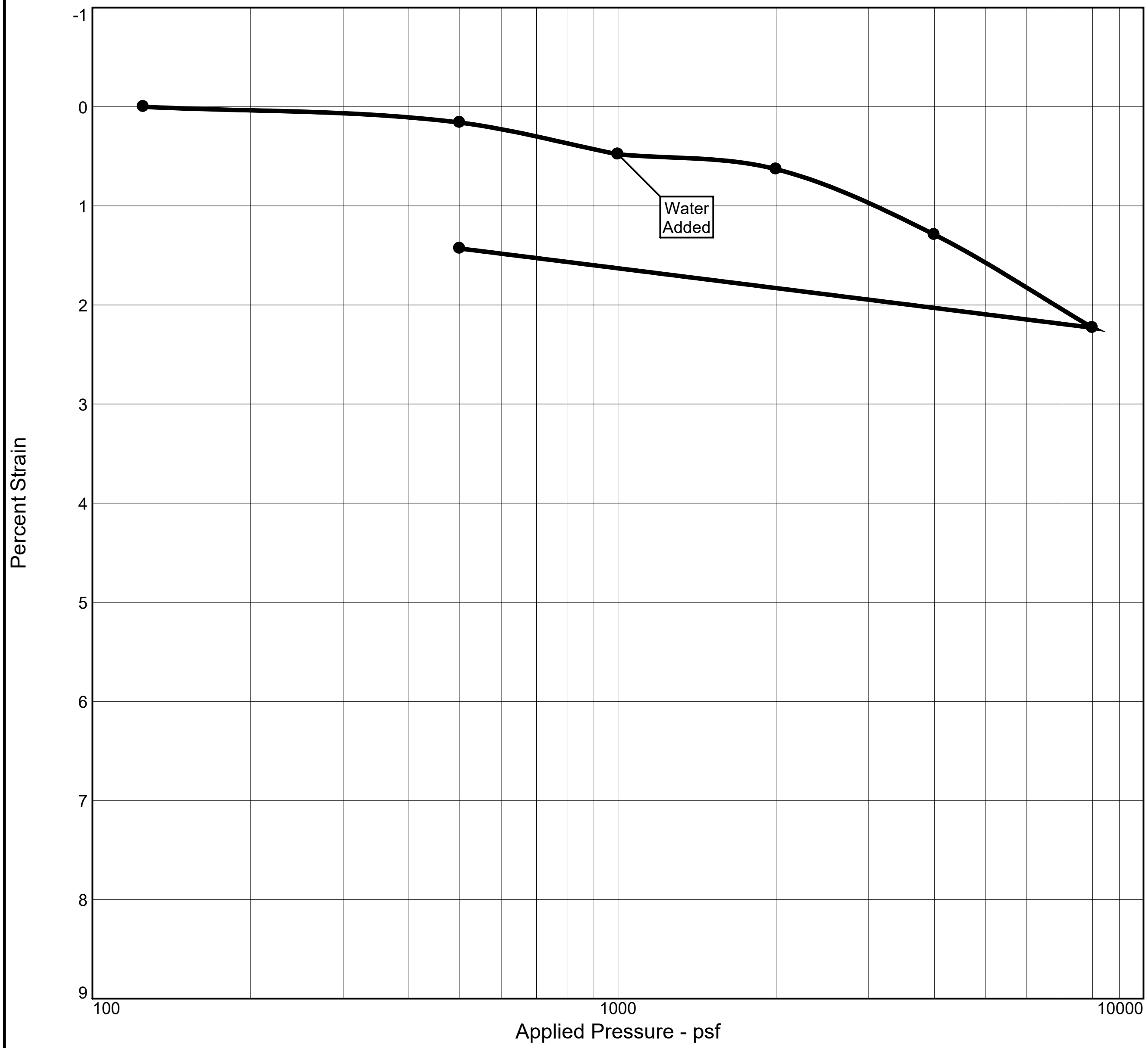
Gorian & Associates

Thousand Oaks, CA

Remarks:

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							

MATERIAL DESCRIPTION

Project No. 2880-29-2- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 22½' **Sample Number:** B-109

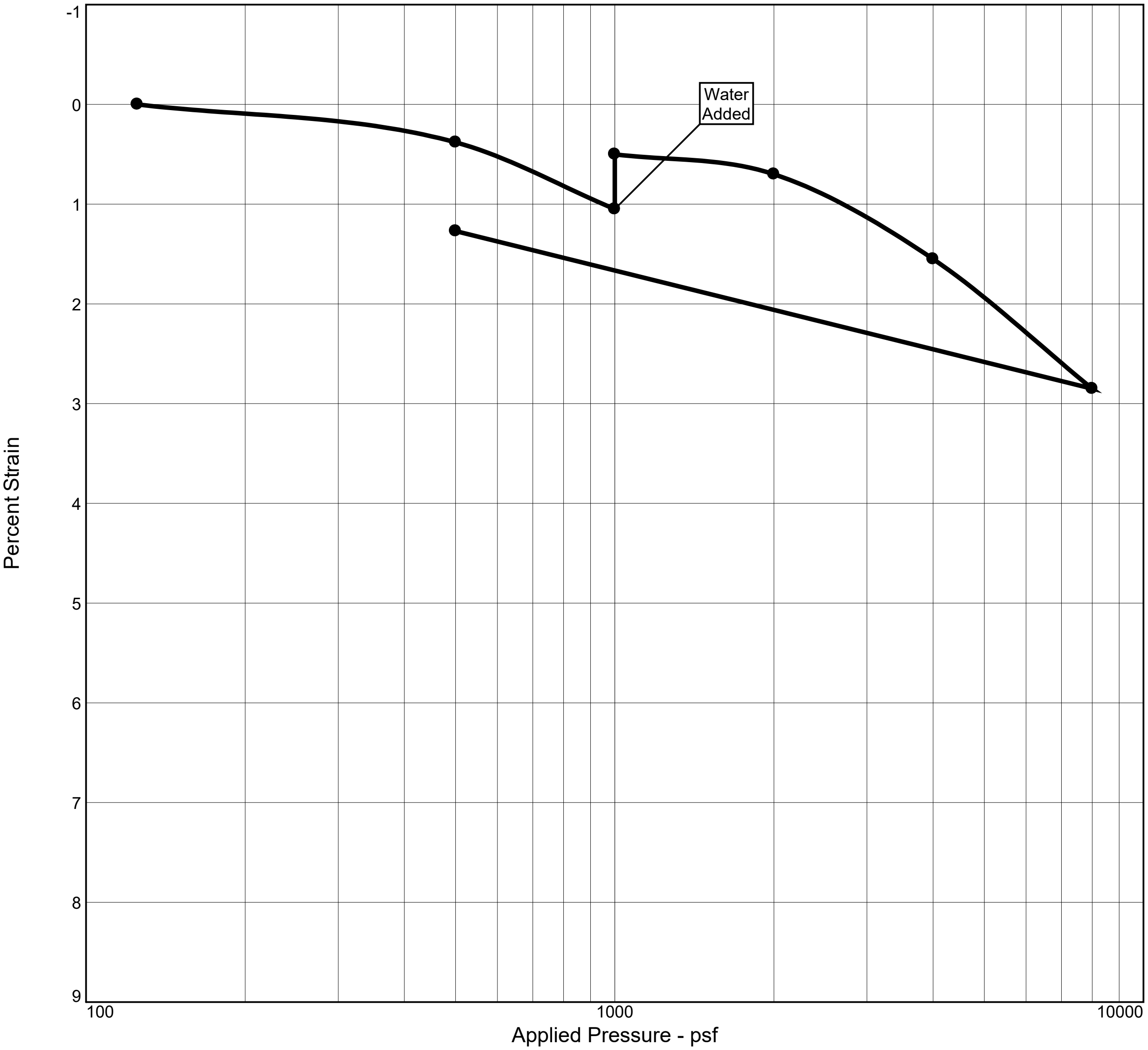
Remarks:

Gorian & Associates

Thousand Oaks, CA

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							

MATERIAL DESCRIPTION

Project No. 2880-29-2- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 19' **Sample Number:** B-111

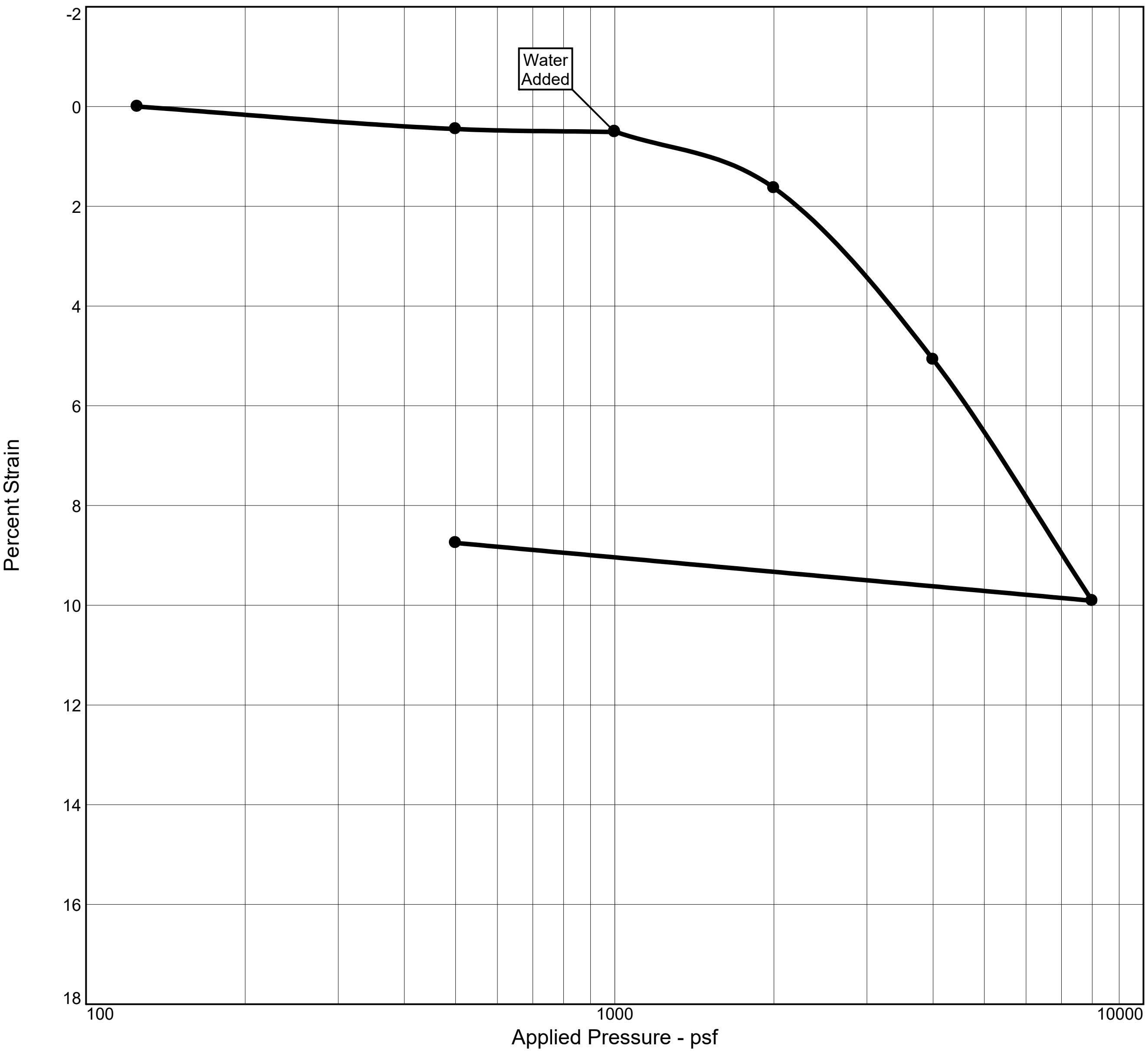
Remarks:

Gorian & Associates

Thousand Oaks, CA

Figure

CONSOLIDATION TEST REPORT



Natural		Dry Dens. (pcf)	LL	PI	Sp. Gr.	USCS	AASHTO	Initial Void Ratio
Saturation	Moisture							

MATERIAL DESCRIPTION

Project No. 2880-29-2- **Client:** LAUSD

Project: Los Angeles Unified School District
SOCES

Depth: 12' **Sample Number:** B-112

Gorian & Associates

Thousand Oaks, CA

Remarks:

Figure

Atlantic Consultants

112 Bunker Court
Folsom, CA 95630
(ph) 916.849.6420 (fax) 916.983.1838
Kerri@AtlanticCorrosionEngineers.com
corrprincess@ardennet.com
www.AtlanticCorrosionEngineers.com

June 30, 2015

Gorian and Associates, Inc.
Attention: Sheryl Shatz
Thousand Oaks, CA 91320

Atlantic Job No.: 2015-038

Subject: Soil Chemistry Analysis for Gorian Job # 2880-29-1-100
2 Samples: LAUSD, Sherman Oaks Center for Enriched Studies
(B-1 @ 5' and B-2 @ 3')

Sample Number	As Rec'd Resistivity (ohm-cm)	[1]Minimum Resistivity (ohm-cm)	[2] Ph	[3] Sulfate %	[3] Chloride %	[4] Ammonia %	[5] Keldahl Nitrogen %	(As Rec'd) Description
B-1	6,800	1,080	6.93	0.0230	0.0024	<0.0001	0.0088	Light Brn. Moist
B-2	4,000	800	6.79	0.0250	0.0016	<0.0001	0.0197	Med. Brn. Moist

NOTE: SAMPLES WERE ANALYZED IN ACCORDANCE WITH THE FOLLOWING METHODS.

1. MINIMUM RESISTIVITY DETERMINED BY SOIL BOX METHOD, (PER ASTM G-57)
2. PH MEASURED BY POTENTIOMETRIC METHOD USING STANDARD ELECTRODES. (PER CAL TRANS. #643)
3. CHLORIDE AND SULFATE WERE ANALYZED IN ACCORDANCE WITH EPA METHODS FOR CHEMICAL ANALYSIS FOR WATER AND WASTE, NO. 300 EPA-600/4-79-020. CONCENTRATION BY WEIGHT OF DRY SOIL.
4. AMMONIA WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 350.2
5. KELDAHL NITROGEN WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 351.2

CONCLUSIONS:

Material	**Corrosion Class**	**Recommendation**
Concrete	Negligible for sulfate and chloride exposure. pH is neutral. (ACI 318)	-Type II Portland cement for concrete with maximum water cement ratio of 0.50 and a minimum of 3 inches of cover for steel reinforcement. - It is recommended that an impermeable moisture barrier (minimum 6 mil visqueen) be installed between concrete slabs and soil to reduce penetration of moisture from the soil into concrete slabs.
Steel Cast/Ductile Iron Mortar Coated Steel	Corrosive to Moderately Corrosive	- Install corrosion monitoring and cathodic protection for buried metal structures and piping. - Install joint bonds on all non-welded joints for buried ferrous metal piping to facilitate corrosion monitoring and proper operation of cathodic protection systems. - Electrically isolate underground metal piping from above grade piping and other metallic structures. - Use separate ground rods for grounding interior piping.
Copper Piping	Corrosive.	- Overhead plumbing is the most effective method of corrosion control. - Copper pipe is subject to corrosion when exposed to even trace amounts of ammonia. - Electrical isolation between hot and cold water lines and between structural steel should be maintained.

The test results are based on the samples provided, which may not be representative of overall site conditions. Additional sampling may be required to more fully characterize soil conditions.

Sincerely,

Kerri M Howell

Kerri M. Howell, PE
President

Atlantic Consultants

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September 26, 2016

Gorian and Associates, Inc.
Attention: Sheryl N. Shatz
3595 Old Conejo Road
Thousand Oaks, CA 91320

Atlantic Job No.: 2016-054

Subject: Soil Chemistry Analysis for Gorian Job # 2880-2-2-10
2 Samples: LAUSD, SOCES (B-101@1' and B-106 @3')

# Sample Number	As Rec'd Resistivity (ohm-cm)	[1]Minimum Resistivity (ohm-cm)	[2] Ph	[3] Sulfate %	[3] Chloride %	[4] Ammonia %	[5] Keldahl Nitrogen %	(As Rec'd) Description
B-101	3,200	1,240	7.12	0.0069	<0.0005	<0.0001	0.0194	Dark Brown, clay- moist
B-106	4,800	760	6.85	0.0099	0.0005	<0.0001	0.0178	Dark Brown, clay- moist

NOTE: SAMPLES WERE ANALYZED IN ACCORDANCE WITH THE FOLLOWING METHODS.

1. MINIMUM RESISTIVITY DETERMINED BY SOIL BOX METHOD, (PER ASTM G-57)
2. PH MEASURED BY POTENTIOMETRIC METHOD USING STANDARD ELECTRODES. (PER CAL TRANS. #643)
3. CHLORIDE AND SULFATE WERE ANALYZED IN ACCORDANCE WITH EPA METHODS FOR CHEMICAL ANALYSIS FOR WATER AND WASTE, NO. 300 EPA-600/4-79-020. CONCENTRATION BY WEIGHT OF DRY SOIL.
4. AMMONIA WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 350.2
5. KELDAHL NITROGEN WAS ANALYZED IN ACCORDANCE WITH EPA METHOD 351.2

CONCLUSIONS:

Material	**Corrosion Class**	**Recommendation**
Concrete	Negligible for sulfate and chloride exposure. pH is neutral.. (ACI 318)	-Type II Portland cement for concrete with maximum water cement ratio of 0.50 and a minimum of 3 inches of cover for steel reinforcement. - It is recommended that an impermeable moisture barrier (minimum 6 mil visqueen) be installed between concrete slabs and soil to reduce penetration of moisture from the soil into concrete slabs.
Steel Cast/Ductile Iron Mortar Coated Steel	Corrosive to moderately corrosive	- Install corrosion monitoring and cathodic protection for buried metal structures and piping. - Install joint bonds on all non-welded joints for buried ferrous metal piping to facilitate corrosion monitoring and proper operation of cathodic protection systems. - Electrically isolate underground metal piping from above grade piping and other metallic structures. - Use separate ground rods for grounding interior piping.
Copper Piping	Corrosive.	- Overhead plumbing is the most effective method of corrosion control. - Copper pipe is subject to corrosion when exposed to even trace amounts of ammonia. - Electrical isolation between hot and cold water lines and between structural steel should be maintained.

Atlantic Consultants

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www.AtlanticCorrosionEngineers.com

The test results are based on the sample provided, which may not be representative of overall site conditions. Additional sampling may be required to more fully characterize soil conditions.

Sincerely,

Kerri M Howell

Kerri M. Howell, PE
President

NV5

RESISTANCE "R" VALUE TEST

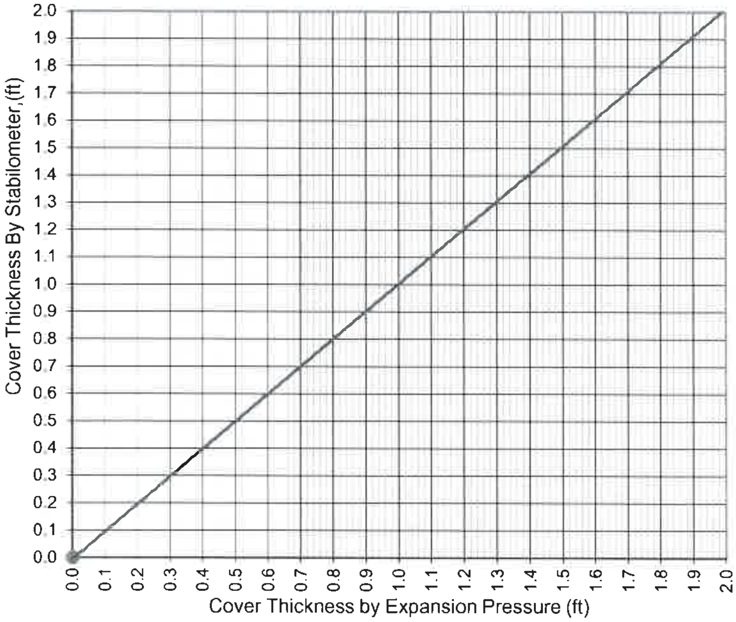
(CTM301 Caltrans / ASTM D2844)

Date:	9/27/2016	Job Number:	10-938
Client:	Gorian & Associates	Report Number:	4592
Address:	NR	Lab Number:	85996/113383

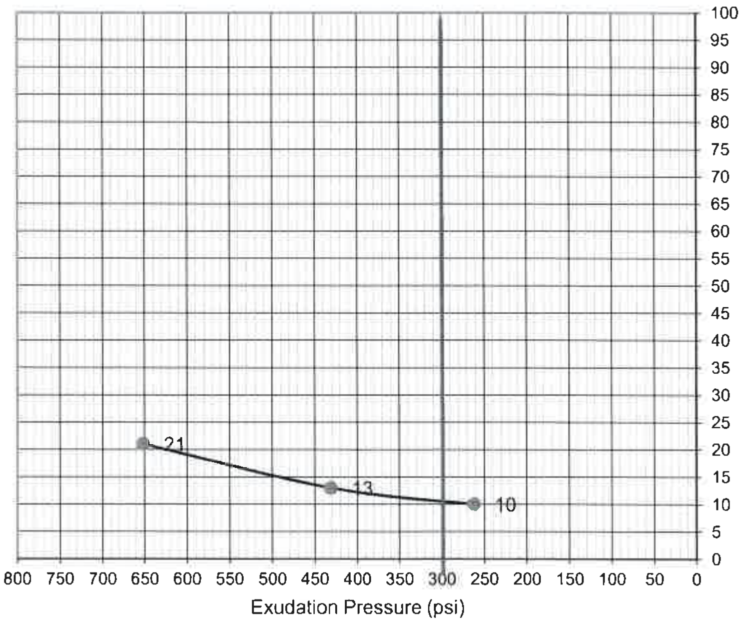
Project : Gorian Soces
Project Address : NR

Material: Brown silty CLAY
Location: Composite (B-104@1.0, B-104@50', B-103@1.0, B-100, 101 @1.0')
Samples By: Client
Date Recived: 9/16/16

EXPANSION PRESSURE CHART



EXUDATION PRESSURE CHART



TEST SPECIMEN	A	B	C	D
COMP. FOOT PRESSURE, psi	165	115	90	
INITIAL MOISTURE %	2.8	2.8	2.8	
MOISTURE @ COMPACTION %	8.8	10.5	12.3	
DRY DENSITY, pcf	118.5	114.6	110.9	
EXUDATION PRESSURE, psi	652	432	263	
STABILOMETER VALUE 'R'	21	13	10	

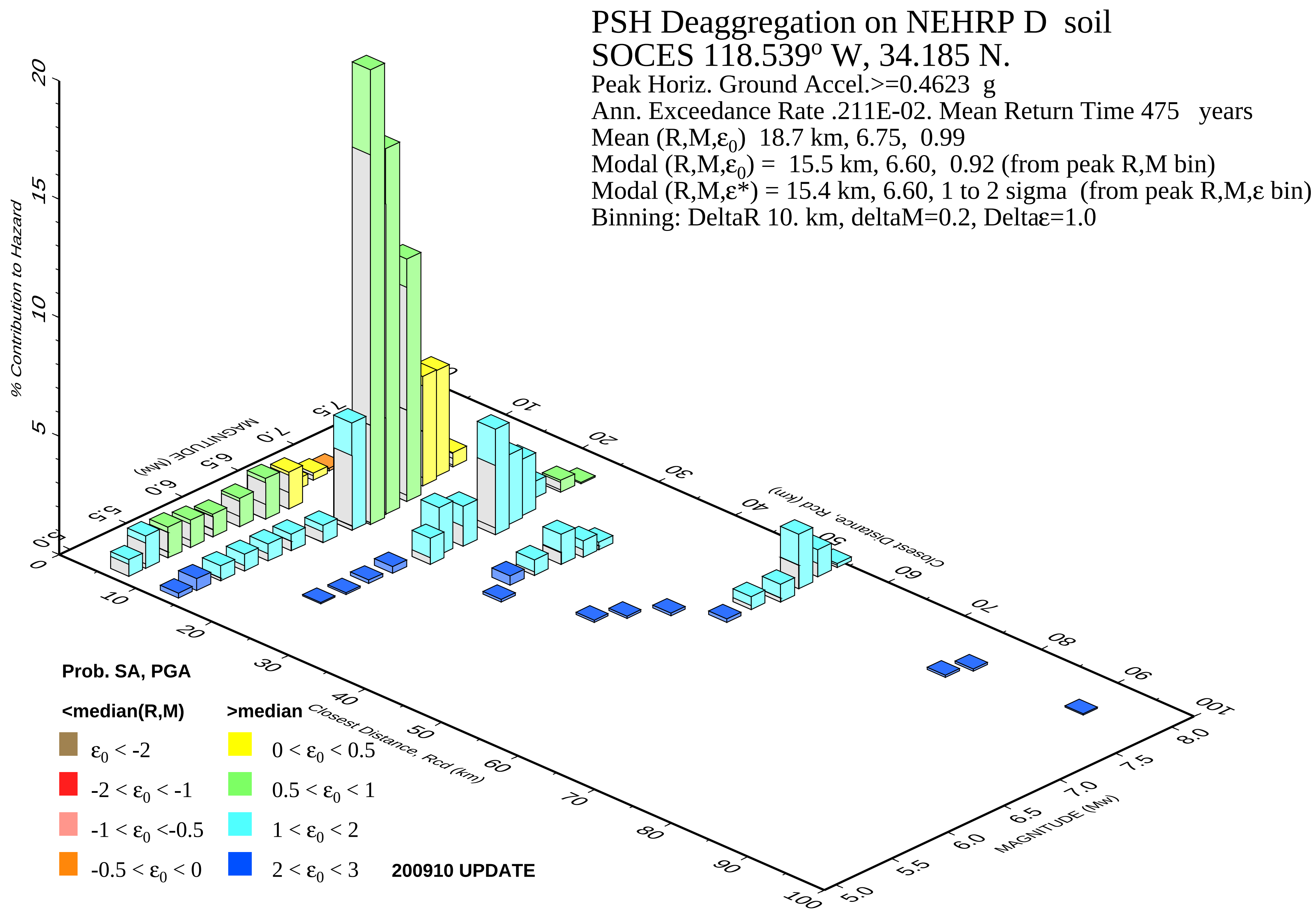
R-VALUE BY EXUDATION	11
R-VALUE BY EXPANSION	-
R-VALUE AT EQUILIBRIUM	**11**

Respectfully Submitted,
NV5 West, Inc.

Sam Koohi, PE
Engineering Manager

APPENDIX C

SEISMICALLY INDUCED SETTLEMENT ANALYSES



PSH Deaggregation on NEHRP D soil
SOCES 118.539° W, 34.185 N.
Peak Horiz. Ground Accel.>=0.4623 g
Ann. Exceedance Rate .211E-02. Mean Return Time 475 years
Mean (R,M,ε_0) 18.7 km, 6.75, 0.99
Modal (R,M,ε_0) = 15.5 km, 6.60, 0.92 (from peak R,M bin)
Modal (R,M,ε^*) = 15.4 km, 6.60, 1 to 2 sigma (from peak R,M,ε bin)
Binning: DeltaR 10. km, deltaM=0.2, Deltaε=1.0

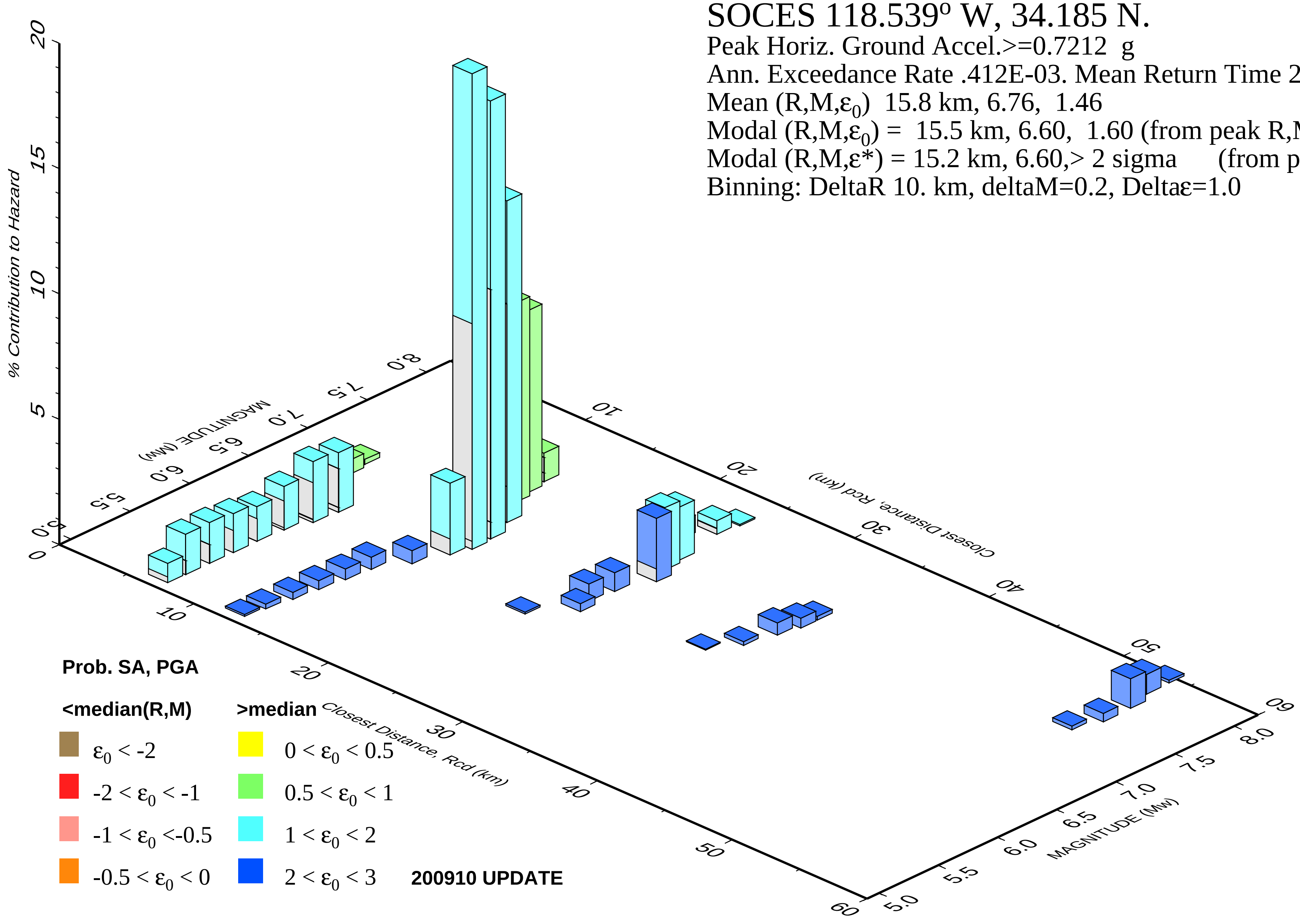
Prob. SA, PGA

<median(R,M)	**>median**
🟫 $\varepsilon_0 < -2$	🟨 $0 < \varepsilon_0 < 0.5$
🟥 $-2 < \varepsilon_0 < -1$	🟩 $0.5 < \varepsilon_0 < 1$
🟥 $-1 < \varepsilon_0 < -0.5$	🟦 $1 < \varepsilon_0 < 2$
🟧 $-0.5 < \varepsilon_0 < 0$	🟦 $2 < \varepsilon_0 < 3$

200910 UPDATE

GMT 2016 Oct 7 16:04:26 **Distance (R), magnitude (M), epsilon (E0,E) deaggregation for a site on soil with average vs= 275. m/s top 30 m. USGS CGHT PSHA2008 UPDATE Bins with lt 0.05% contrib. omitted**

PSH Deaggregation on NEHRP D soil
SOCES 118.539° W, 34.185 N.
Peak Horiz. Ground Accel.>=0.7212 g
Ann. Exceedance Rate .412E-03. Mean Return Time 2475 years
Mean (R,M,ε_0) 15.8 km, 6.76, 1.46
Modal (R,M,ε_0) = 15.5 km, 6.60, 1.60 (from peak R,M bin)
Modal (R,M,ε^*) = 15.2 km, 6.60,> 2 sigma (from peak R,M,ε bin)
Binning: DeltaR 10. km, deltaM=0.2, Deltaε=1.0



GMT 2016 Oct 7 16:02:51 Distance (R), magnitude (M), epsilon (E0,E) deaggregation for a site on soil with average vs= 275. m/s top 30 m. USGS CGHT PSHA2008 UPDATE Bins with lt 0.05% contrib. omitted

USGS Design Maps Detailed Report

ASCE 7-10 Standard (34.1848°N, 118.5394°W)

Site Class D – “Stiff Soil”, Risk Category IV (e.g. essential facilities)

Section 11.4.1 — Mapped Acceleration Parameters

Note: Ground motion values provided below are for the direction of maximum horizontal spectral response acceleration. They have been converted from corresponding geometric mean ground motions computed by the USGS by applying factors of 1.1 (to obtain S_S) and 1.3 (to obtain S_1). Maps in the 2010 ASCE-7 Standard are provided for Site Class B. Adjustments for other Site Classes are made, as needed, in Section 11.4.3.

From Figure 22-1 [1] $S_S = 1.843$ g

From Figure 22-2 [2] $S_1 = 0.647$ g

Section 11.4.2 — Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class D, based on the site soil properties in accordance with Chapter 20.

Table 20.3–1 Site Classification

Site Class	$\bar{v}_s$	$\bar{N}$ or $\bar{N}_{ch}$	$\bar{s}_u$
A. Hard Rock	>5,000 ft/s	N/A	N/A
B. Rock	2,500 to 5,000 ft/s	N/A	N/A
C. Very dense soil and soft rock	1,200 to 2,500 ft/s	>50	>2,000 psf
D. Stiff Soil	600 to 1,200 ft/s	15 to 50	1,000 to 2,000 psf
E. Soft clay soil	<600 ft/s	<15	<1,000 psf
	Any profile with more than 10 ft of soil having the characteristics: • Plasticity index *PI* > 20, • Moisture content *w* ≥ 40%, and • Undrained shear strength $\bar{s}_u$ < 500 psf		
F. Soils requiring site response analysis in accordance with Section 21.1	See Section 20.3.1		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Section 11.4.3 — Site Coefficients and Risk-Targeted Maximum Considered Earthquake (MCE_R) Spectral Response Acceleration Parameters

Table 11.4–1: Site Coefficient F_a

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at Short Period				
	$S_S \le 0.25$	$S_S = 0.50$	$S_S = 0.75$	$S_S = 1.00$	$S_S \ge 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_S

For Site Class = D and S_S = 1.843 g, F_a = 1.000

Table 11.4–2: Site Coefficient F_v

Site Class	Mapped MCE_R Spectral Response Acceleration Parameter at 1–s Period				
	$S_1 \le 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \ge 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of S_1

For Site Class = D and S_1 = 0.647 g, F_v = 1.500

Equation (11.4–1): $S_{MS} = F_aS_S = 1.000 \times 1.843 = 1.843$ g

Equation (11.4–2): $S_{M1} = F_vS_1 = 1.500 \times 0.647 = 0.970$ g

Section 11.4.4 — Design Spectral Acceleration Parameters

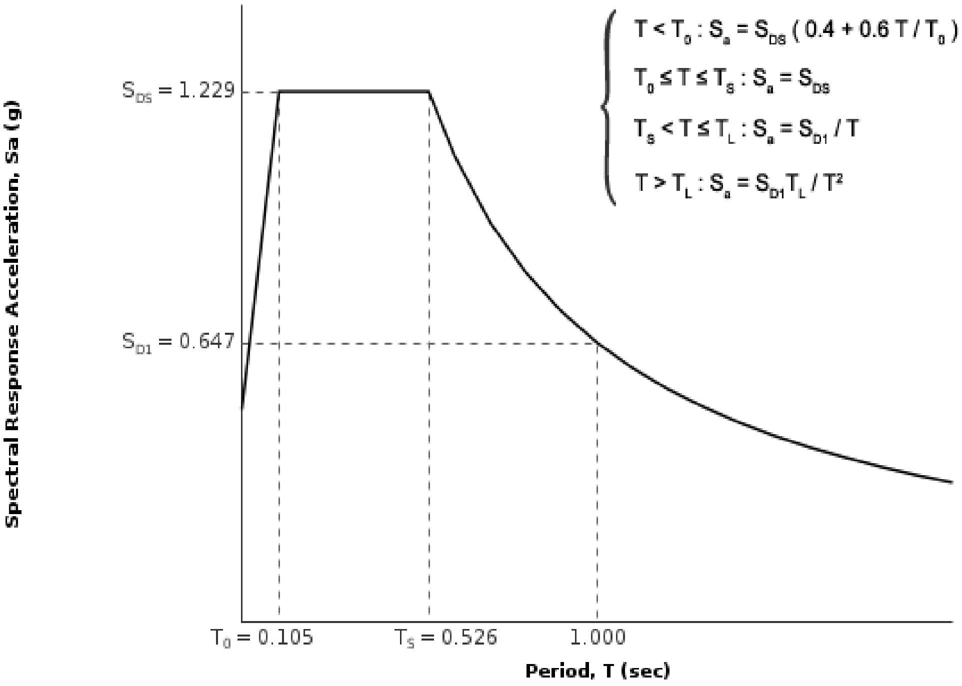
Equation (11.4–3): $S_{DS} = ⅔\ S_{MS} = ⅔ \times 1.843 = 1.229$ g

Equation (11.4–4): $S_{D1} = ⅔\ S_{M1} = ⅔ \times 0.970 = 0.647$ g

Section 11.4.5 — Design Response Spectrum

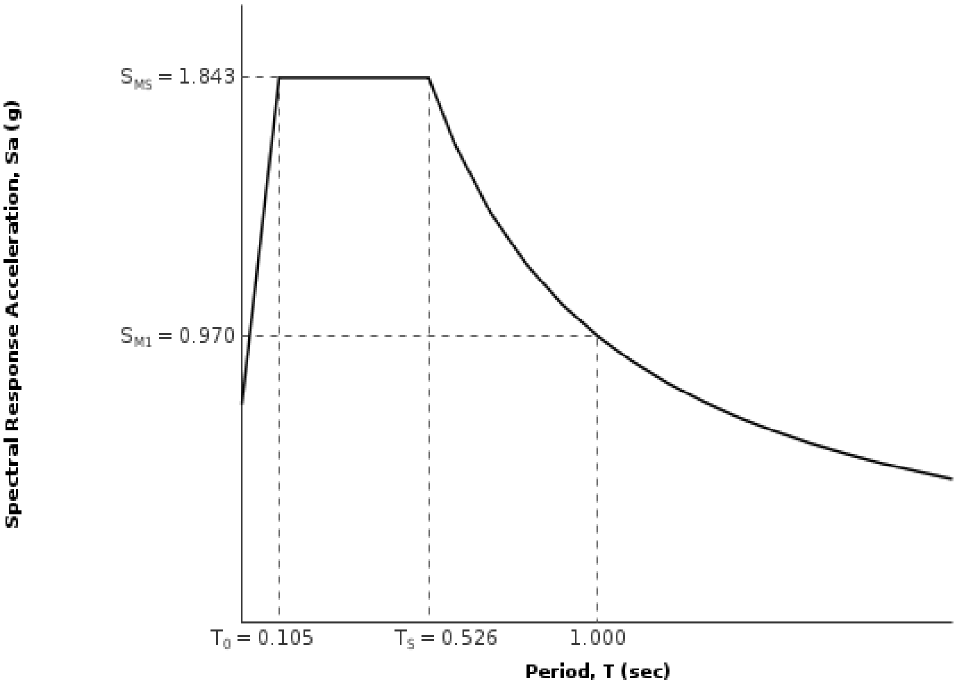
From Figure 22-12 [3] $T_L = 8$ seconds

Figure 11.4–1: Design Response Spectrum



Section 11.4.6 — Risk-Targeted Maximum Considered Earthquake (MCE_R) Response Spectrum

The MCE_R Response Spectrum is determined by multiplying the design response spectrum above by 1.5.



Section 11.8.3 — Additional Geotechnical Investigation Report Requirements for Seismic Design Categories D through F

Site Class Mapped MCE Geometric Mean Peak Ground Acceleration, PGA
PGA ≤ 0.10 PGA = 0.20 PGA = 0.30 PGA = 0.40 PGA ≥ 0.50

From Figure 22-7 [4] PGA = 0.672

Equation (11.8–1): $PGA_M = F_{PGA}PGA = 1.000 \text{ x } 0.672 = 0.672 \text{ g}$

Table 11.8–1: Site Coefficient F_{PGA}

Site Class	Mapped MCE Geometric Mean Peak Ground Acceleration, PGA				
	PGA ≤ 0.10	PGA = 0.20	PGA = 0.30	PGA = 0.40	PGA ≥ 0.50
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	See Section 11.4.7 of ASCE 7				

Note: Use straight–line interpolation for intermediate values of PGA

For Site Class = D and PGA = 0.672 g, F_{PGA} = 1.000

Section 21.2.1.1 — Method 1 (from Chapter 21 – Site-Specific Ground Motion Procedures for Seismic Design)

From Figure 22-17 [5] $C_{RS} = 1.027$

From Figure 22-18 [6] $C_{R1} = 1.038$

Section 11.6 — Seismic Design Category

VALUE OF S_{DS}	RISK CATEGORY		
	I or II	III	IV

Table 11.6-1 Seismic Design Category Based on Short Period Response Acceleration Parameter

VALUE OF S_{DS}	RISK CATEGORY		
	I or II	**III**	**IV**
$S_{DS} < 0.167g$	A	A	A
$0.167g \le S_{DS} < 0.33g$	B	B	C
$0.33g \le S_{DS} < 0.50g$	C	C	D
$0.50g \le S_{DS}$	D	D	D

For Risk Category = IV and S_{DS} = 1.229 g, Seismic Design Category = D

Table 11.6-2 Seismic Design Category Based on 1-S Period Response Acceleration Parameter

VALUE OF S_{D1}	RISK CATEGORY		
	I or II	**III**	**IV**
$S_{D1} < 0.067g$	A	A	A
$0.067g \le S_{D1} < 0.133g$	B	B	C
$0.133g \le S_{D1} < 0.20g$	C	C	D
$0.20g \le S_{D1}$	D	D	D

For Risk Category = IV and S_{D1} = 0.647 g, Seismic Design Category = D

Note: When S_1 is greater than or equal to 0.75g, the Seismic Design Category is **E** for buildings in Risk Categories I, II, and III, and **F** for those in Risk Category IV, irrespective of the above.

Seismic Design Category ≡ "the more severe design category in accordance with Table 11.6-1 or 11.6-2" = D

Note: See Section 11.6 for alternative approaches to calculating Seismic Design Category.

References

1. *Figure 22-1*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-1.pdf
2. *Figure 22-2*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-2.pdf
3. *Figure 22-12*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-12.pdf
4. *Figure 22-7*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-7.pdf
5. *Figure 22-17*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-17.pdf
6. *Figure 22-18*: http://earthquake.usgs.gov/hazards/designmaps/downloads/pdfs/2010_ASCE-7_Figure_22-18.pdf

Design Maps Detailed Report

ASCE 41-13 Retrofit Standard, BSE-1E (34.18479°N, 118.53937°W)

Site Class D – “Stiff Soil”

Section 2.4.1 – General Procedure for Hazard Due to Ground Shaking

20%/50-year maximum direction spectral response acceleration for 0.2s and 1.0s periods, respectively:

From Section 2.4.1.4	$S_{S,20/50} = 0.805$ g
From Section 2.4.1.4	$S_{1,20/50} = 0.288$ g

Section 2.4.1.6 – Adjustment for Site Class

The authority having jurisdiction (not the USGS), site-specific geotechnical data, and/or the default has classified the site as Site Class D, based on the site soil properties in accordance with Section 2.4.1.6.1.

SITE CLASS	SOIL PROFILE NAME	Soil shear wave velocity, $\bar{v}_S$, (ft/s)	Standard penetration resistance, $\bar{N}$	Soil undrained shear strength, $\bar{s}_u$, (psf)
A	Hard rock	$\bar{v}_S > 5{,}000$	N/A	N/A
B	Rock	$2{,}500 < \bar{v}_S \le 5{,}000$	N/A	N/A
C	Very dense soil and soft rock	$1{,}200 < \bar{v}_S \le 2{,}500$	$\bar{N} > 50$	>2,000 psf
D	Stiff soil profile	$600 \le \bar{v}_S < 1{,}200$	$15 \le \bar{N} \le 50$	1,000 to 2,000 psf
E	Stiff soil profile	$\bar{v}_S < 600$	$\bar{N} < 15$	<1,000 psf
E	—	Any profile with more than 10 ft of soil having the characteristics: 1. Plasticity index $PI > 20$, 2. Moisture content $w \ge 40\%$, and 3. Undrained shear strength $\bar{s}_u < 500$ psf		
F	—	Any profile containing soils having one or more of the following characteristics: 1. Soils vulnerable to potential failure or collapse under seismic loading such as liquefiable soils, quick and highly sensitive clays, collapsible weakly cemented soils. 2. Peats and/or highly organic clays ($H > 10$ feet of peat and/or highly organic clay where H = thickness of soil) 3. Very high plasticity clays ($H > 25$ feet with plasticity index $PI > 75$) 4. Very thick soft/medium stiff clays ($H > 120$ feet)		

For SI: 1ft/s = 0.3048 m/s 1lb/ft² = 0.0479 kN/m²

Site Class | Mapped Spectral Acceleration at 1 s Period S_1 / Mapped Spectral Acceleration at Short-Period S_s
$S_1 \le 0.10$ / $S_s \le 0.25$ | $S_1 = 0.20$ / $S_s = 0.50$ | $S_1 = 0.30$ / $S_s = 0.75$ | $S_1 = 0.40$ / $S_s = 1.00$ | $S_1 \ge 0.50$ / $S_s \ge 1.25$

Table 2–3. Values of F_a as a Function of Site Class and Mapped Short-Period Spectral Response Acceleration S_s

Site Class	Mapped Spectral Acceleration at Short-Period S_s				
	$S_S \le 0.25$	$S_S = 0.50$	$S_S = 0.75$	$S_S = 1.00$	$S_S \ge 1.25$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.2	1.2	1.1	1.0	1.0
D	1.6	1.4	1.2	1.1	1.0
E	2.5	1.7	1.2	0.9	0.9
F	Site-specific geotechnical and dynamic site response analyses shall be performed				

Note: Use straight–line interpolation for intermediate values of S_S

For Site Class = D and S_S = 0.805 g, F_a = 1.178

Table 2–4. Values of F_v as a Function of Site Class and Mapped Spectral Response Acceleration at 1 s Period S_1

Site Class	Mapped Spectral Acceleration at 1 s Period S_1				
	$S_1 \le 0.10$	$S_1 = 0.20$	$S_1 = 0.30$	$S_1 = 0.40$	$S_1 \ge 0.50$
A	0.8	0.8	0.8	0.8	0.8
B	1.0	1.0	1.0	1.0	1.0
C	1.7	1.6	1.5	1.4	1.3
D	2.4	2.0	1.8	1.6	1.5
E	3.5	3.2	2.8	2.4	2.4
F	Site-specific geotechnical and dynamic site response analyses shall be performed				

Note: Use straight–line interpolation for intermediate values of S_1

For Site Class = D and S_1 = 0.288 g, F_v = 1.824

Provided as a reference for Equation (2-4): $F_aS_{S,20/50}$ = 1.178 x 0.805 g = 0.948 g

Provided as a reference for Equation (2-5): $F_vS_{1,20/50}$ = 1.824 x 0.288 g = 0.525 g

Provided as a reference for Equation (2-4): $S_{XS,BSE\text{-}1N}$ = ⅔ x $S_{XS,BSE\text{-}2N}$ = ⅔ x $F_aS_{S,BSE\text{-}2N}$ = 1.229 g

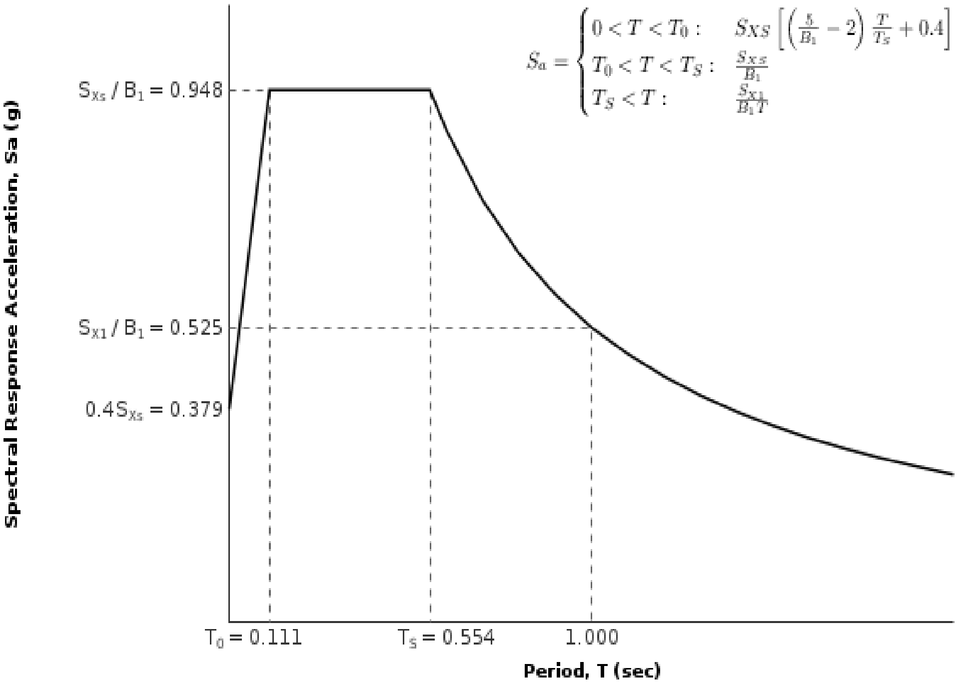
Provided as a reference for Equation (2-5): $S_{X1,BSE\text{-}1N}$ = ⅔ x $S_{X1,BSE\text{-}2N}$ = ⅔ x $F_vS_{1,BSE\text{-}2N}$ = 0.647 g

Equation (2–4): $S_{XS,BSE\text{-}1E}$ = MIN[$F_aS_{S,20/50}$, $S_{XS,BSE\text{-}1N}$] = MIN[0.948g, 1.229g] = 0.948g

Equation (2–5): $S_{X1,BSE\text{-}1E}$ = MIN[$F_vS_{S,20/50}$, $S_{X1,BSE\text{-}1N}$] = MIN[0.525g, 0.647g] = 0.525g

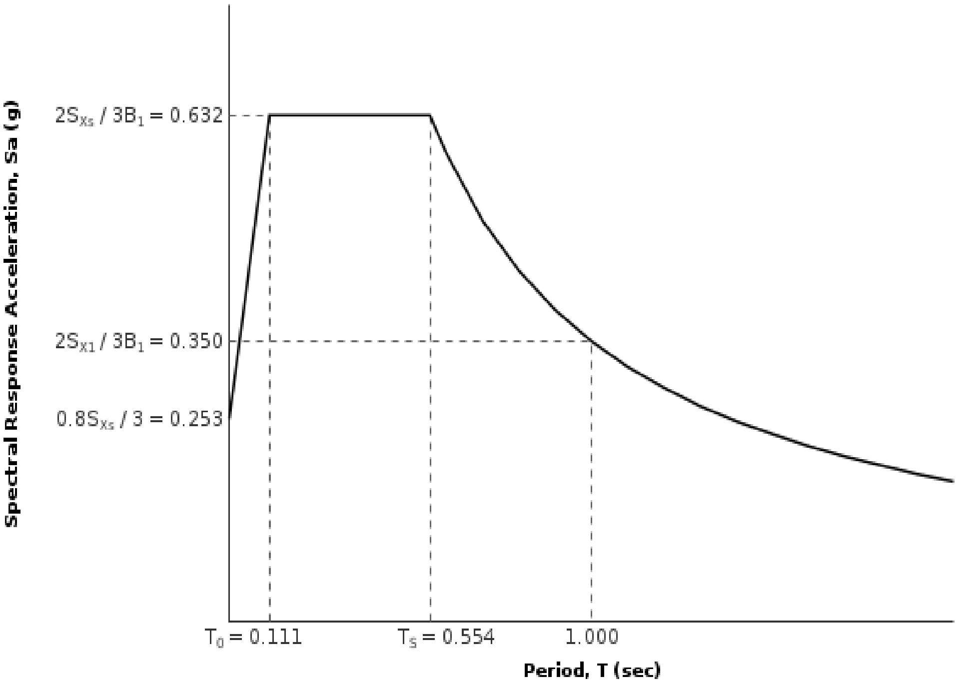
Section 2.4.1.7.1 — General Horizontal Response Spectrum

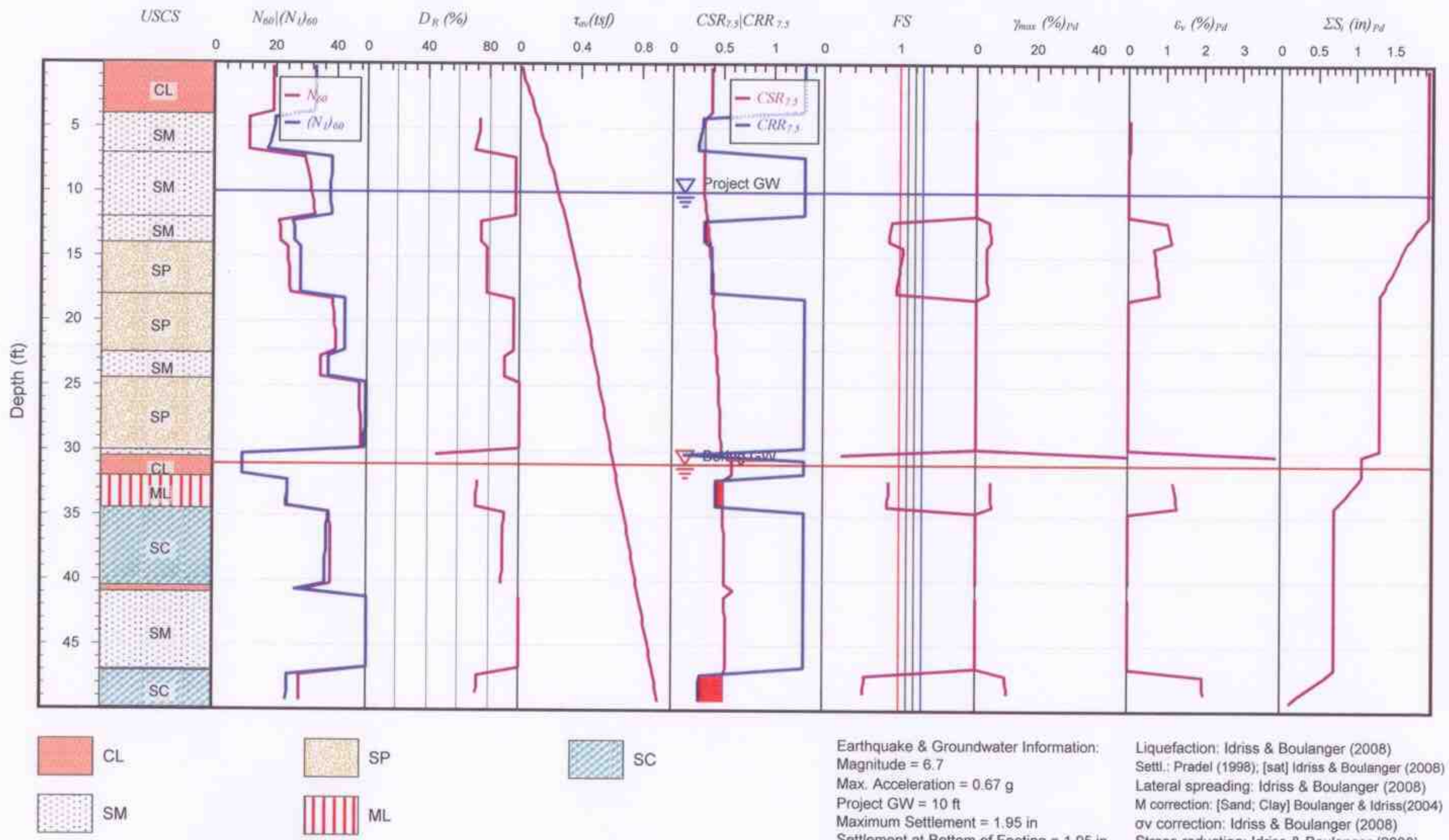
Figure 2-1. General Horizontal Response Spectrum



Section 2.4.1.7.2 — General Vertical Response Spectrum

The General Vertical Response Spectrum is determined by multiplying the General Horizontal Response Spectrum by ⅔.





Earthquake & Groundwater Information:
Magnitude = 6.7
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 1.95 in
Settlement at Bottom of Footing = 1.95 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

GORIAN & ASSOCIATES, INC.

Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:	Tarzana				
Work Order:	2880-29-0-100	Boring No.:	B-1	Figure:	1

X:\2880-0-0-LA Unified Sch Dist-Master File\2880-29-0- SOCES\GeoSuite\GeoSuite_2880-29-0-100_B-1.csv

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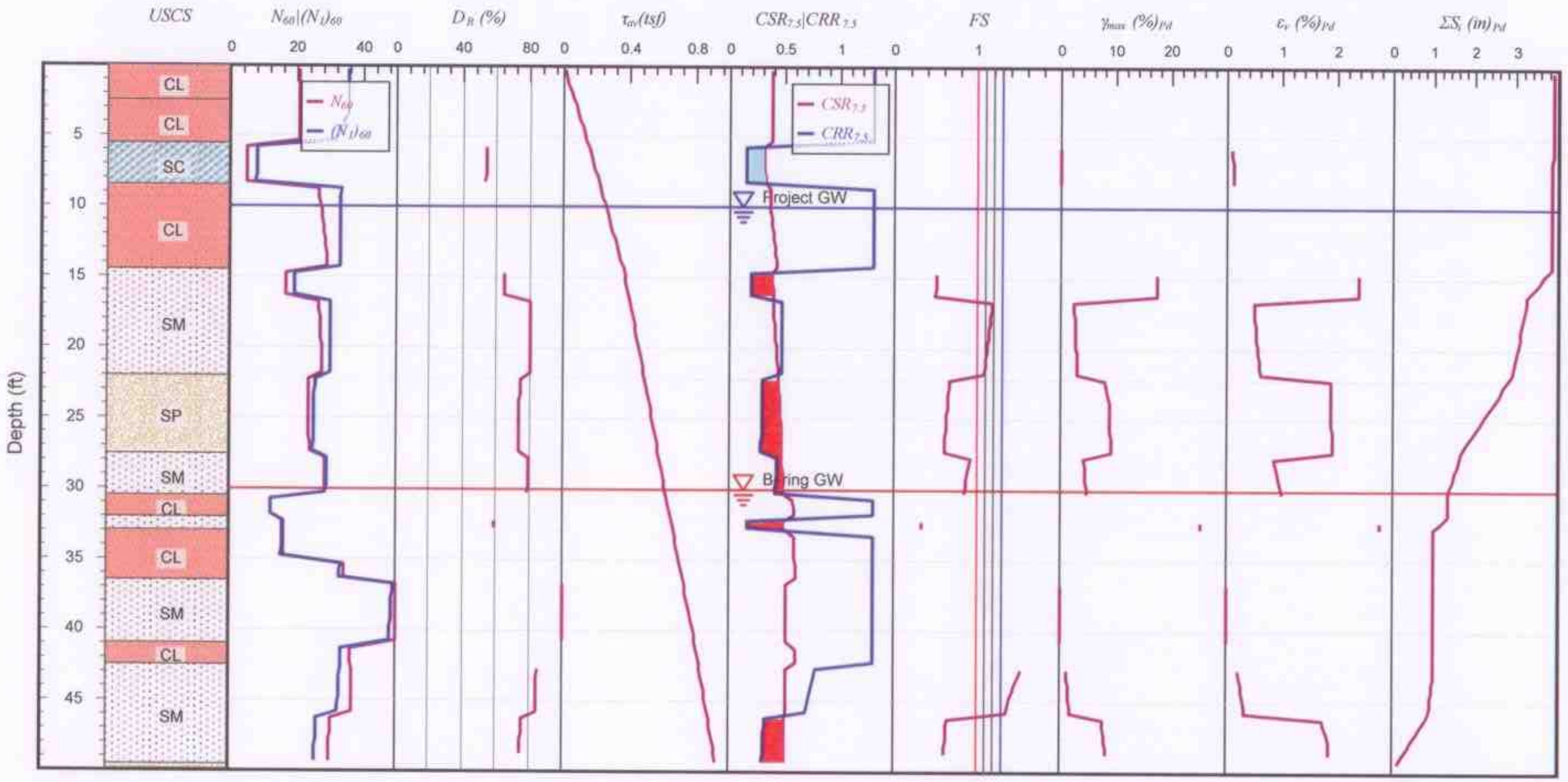

🟥 CL

▨ SC

▒ SM

▒ SP

Earthquake & Groundwater Information:
Magnitude = 6.7
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 3.88 in
Settlement at Bottom of Footing = 3.88 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

GORIAN
& ASSOCIATES, INC.

Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:	Tarzana				
Work Order:	2880-29-0-100	Boring No.:	B-2	Figure:	2

X:\2880-0-0-LA Unified Sch Dist-Master File\2880-29-0- SOCES\GeoSuite_2880-29-0-100_B-2.csv

GeoSuite© Version 2.2.2.2. Developed by Fred Yi, PhD, PE, GE

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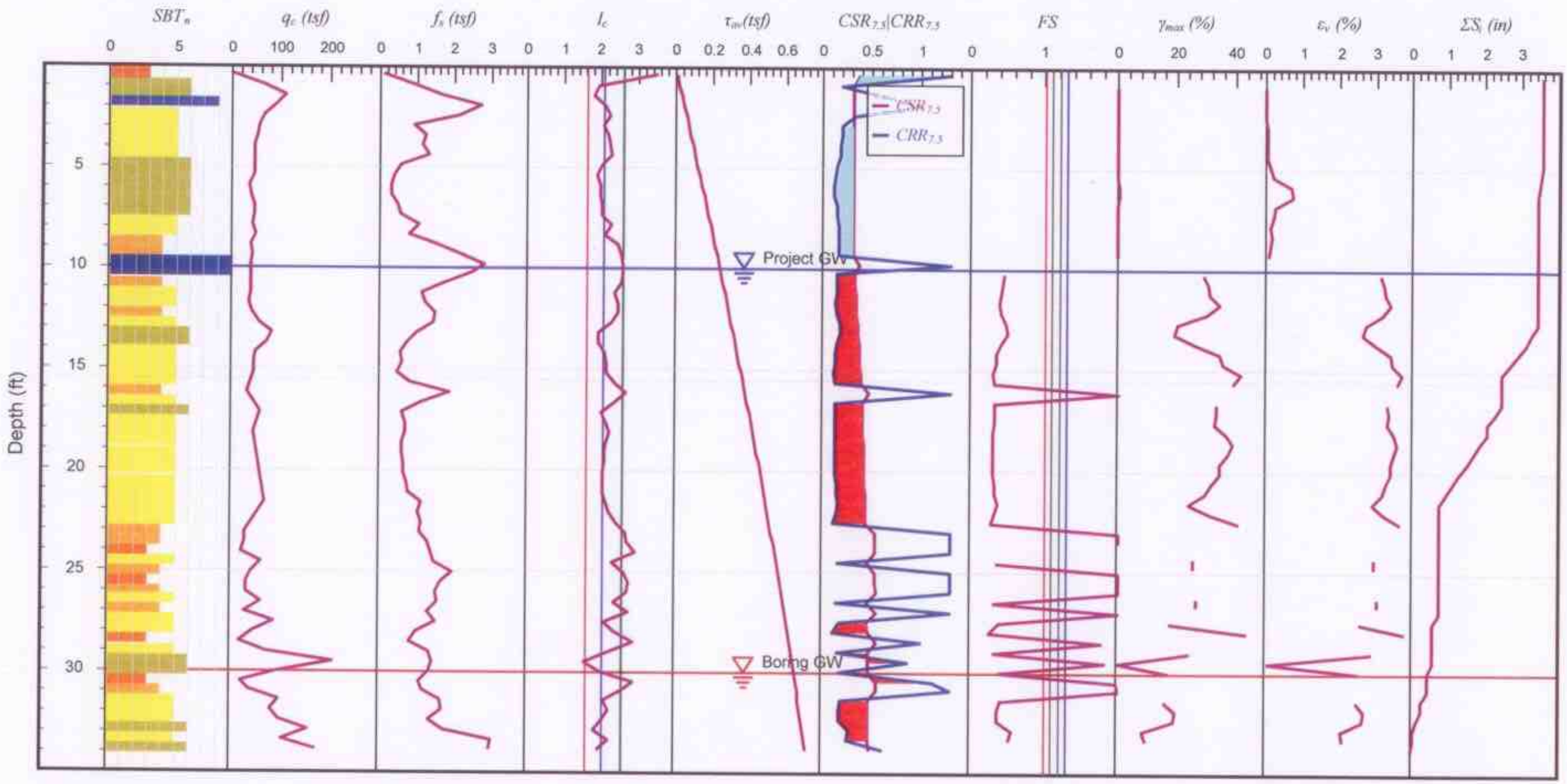

🟥 Sensitive fine grained
🟧 Organic soils - peats
🟧 Clay to silty clay
🟧 Silty clay to clayey silt
🟨 Sandy silt to silty sand
🟫 Silty sand to clean sand
⬛ Dense sand to gravelly sand
🟦 Clayey sand to very stiff sand
🟦 Very stiff fine grained *
* Overconsolidated or cemented

Earthquake & Groundwater Information:
Magnitude = 6.7
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 3.56 in
Settlement at Bottom of Footing = 3.56 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: [dry] Yi (2010); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

GORIAN
& ASSOCIATES, INC.

Seismic Settlement Potential - CPT Data

Project:	SOCES				
Location:	Tarzana				
Work Order:	2880-29-0-100	CPT No.:	CPT-1	Figure:	3

X:\2880-0-0-LA Unified Sch Dist-Master File\2880-29-0- SOCES\GeoSuite_2880-29-0-100_CPT-1.csv

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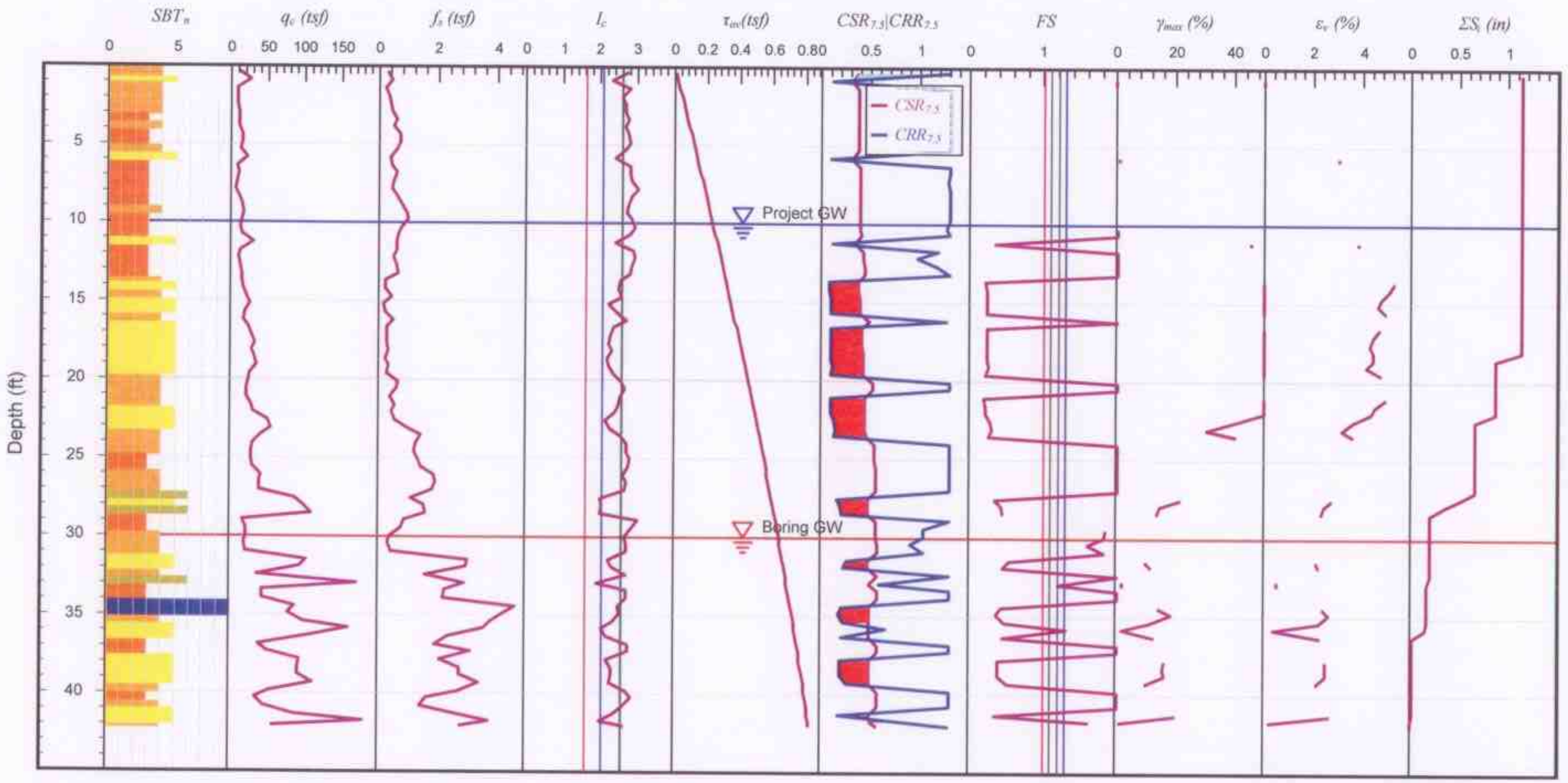
Prepared at 7/1/2015 11:25:05 AM



🟥 Sensitive fine grained

🟥 Organic soils - peats

🟧 Clay to silty clay

🟧 Silty clay to clayey silt

🟨 Sandy silt to silty sand

🟫 Silty sand to clean sand

⬛ Dense sand to gravelly sand

🟦 Clayey sand to very stiff sand

🟦 Very stiff fine grained *

* Overconsolidated or cemented

Earthquake & Groundwater Information:
Magnitude = 6.7
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 1.14 in
Settlement at Bottom of Footing = 1.14 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: [dry] Yi (2010); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

GORIAN & ASSOCIATES, INC.

Seismic Settlement Potential - CPT Data

Project:	SOCES				
Location:	Tarzana				
Work Order:	2880-29-0-100	CPT No.:	CPT-2	Figure:	4

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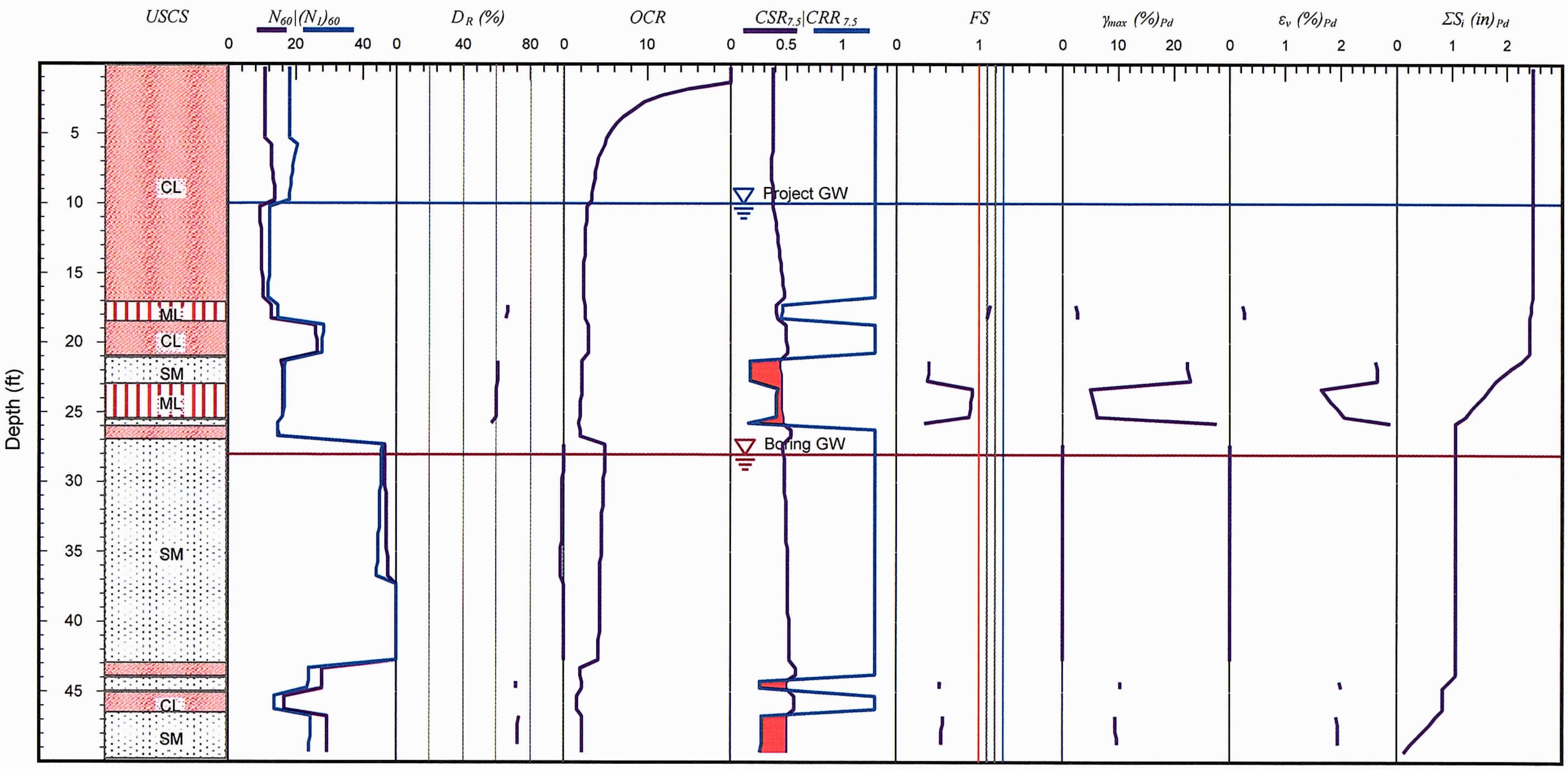

▨ CL

▥ ML

⬚ SM

Earthquake & Groundwater Information:
Magnitude = 6.76
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 2.46 in
Settlement at Bottom of Footing = 2.46 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

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Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:					
Work Order:	2880-29-2-100	Boring No.:	B-100	Figure:	1

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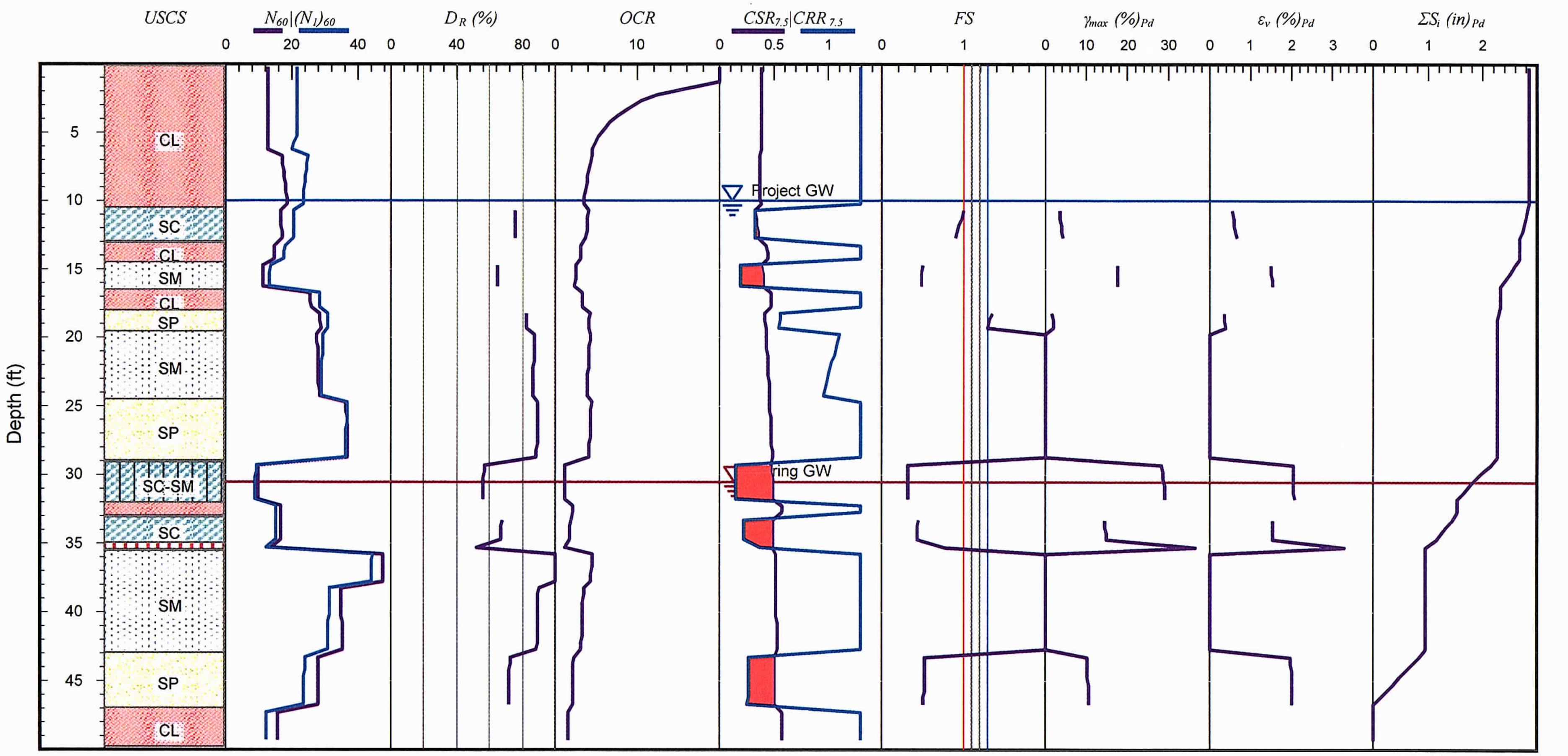

🟥 CL

▨ SC

░ SM

░ SP

▥ SC-SM

▥ ML

Earthquake & Groundwater Information:
Magnitude = 6.76
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 2.86 in
Settlement at Bottom of Footing = 2.86 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

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Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:					
Work Order:	2880-29-2-100	Boring No.:	B-104	Figure:	2

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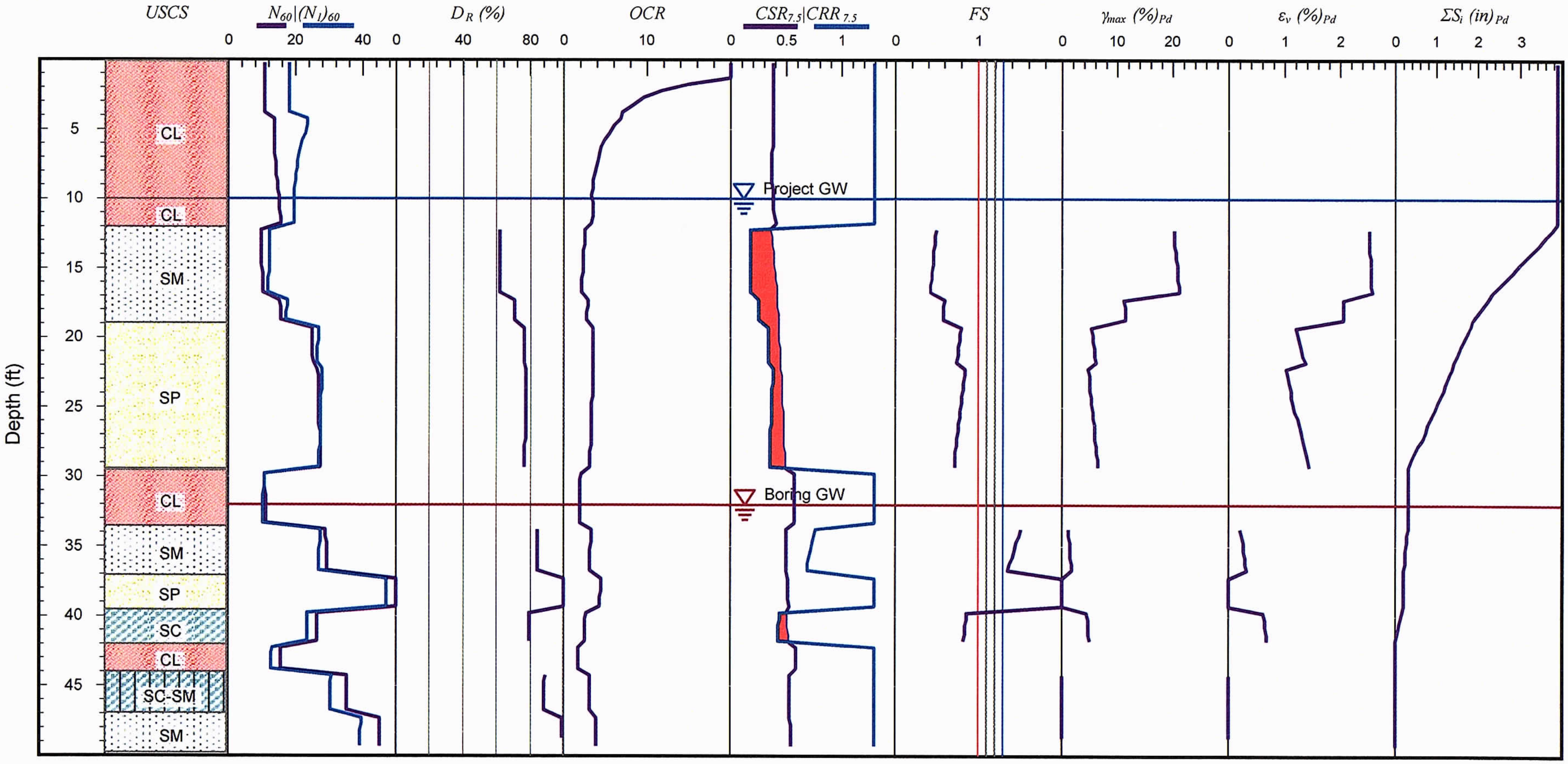

🟥 CL

🟨 SP

▥ SC-SM

░ SM

▨ SC

Earthquake & Groundwater Information:
Magnitude = 6.76
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 3.90 in
Settlement at Bottom of Footing = 3.90 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

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Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:					
Work Order:	2880-29-2-100	Boring No.:	B-106	Figure:	3

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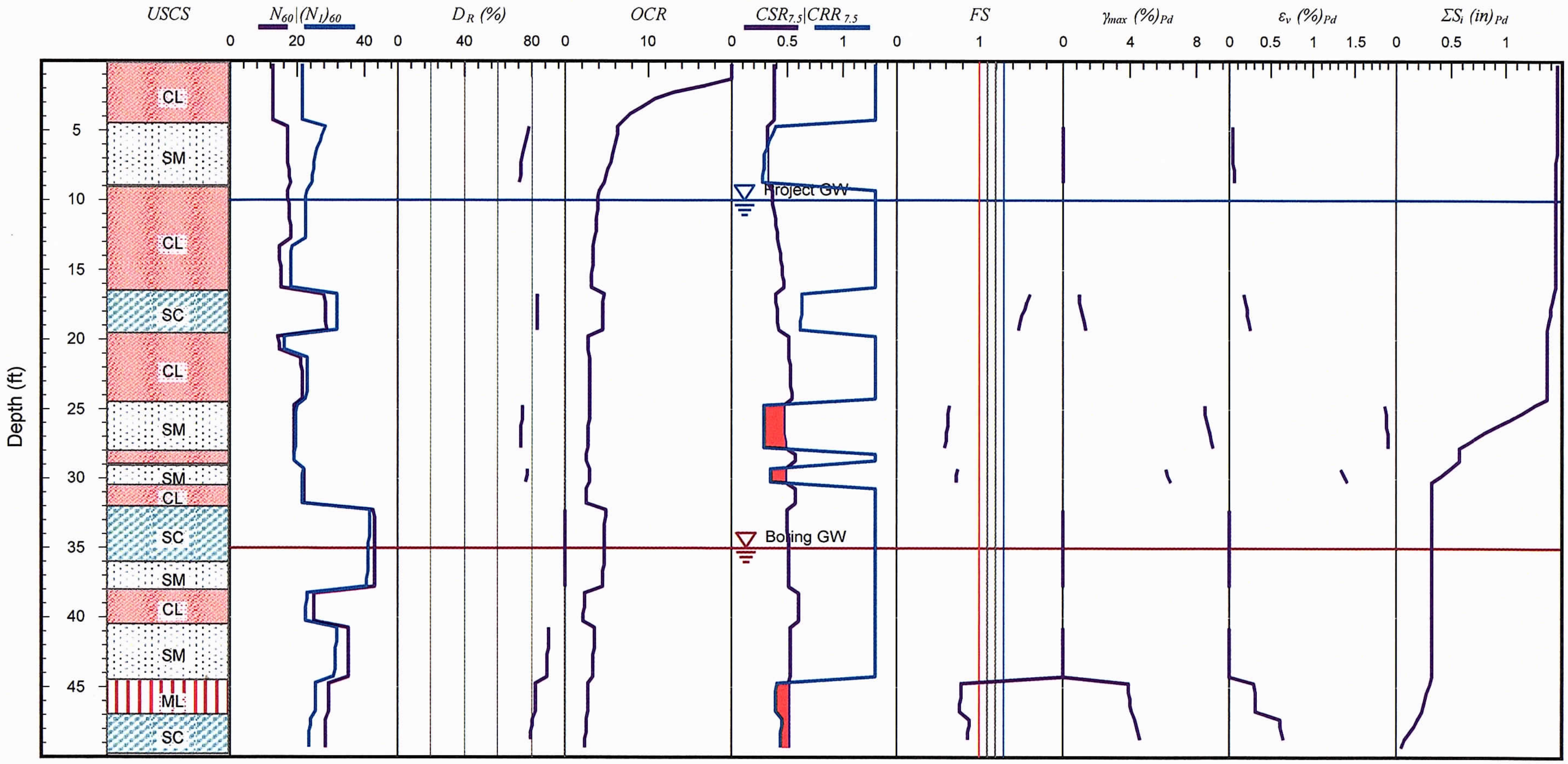

▨ CL

▨ SC

▨ SM

▨ ML

Earthquake & Groundwater Information:
Magnitude = 6.76
Max. Acceleration = 0.67 g
Project GW = 10 ft
Maximum Settlement = 1.46 in
Settlement at Bottom of Footing = 1.46 in

Liquefaction: Idriss & Boulanger (2008)
Settl.: Pradel (1998); [sat] Idriss & Boulanger (2008)
Lateral spreading: Idriss & Boulanger (2008)
M correction: [Sand; Clay] Boulanger & Idriss(2004)
σv correction: Idriss & Boulanger (2008)
Stress reduction: Idriss & Boulanger (2008)

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& ASSOCIATES, INC.

Seismic Settlement Potential - SPT Data

Project:	SOCES				
Location:					
Work Order:	2880-29-2-100	Boring No.:	B-109	Figure:	4

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Prepared at 10/7/2016 9:18:46 AM

APPENDIX D

INFILTRATION EVALUATION REPORT

GORIAN
& ASSOCIATES, INC.

Applied Earth Sciences
Geotechnical Engineers
Engineering Geologists
DSA Accepted Testing Laboratory
Special Inspection and Materials Testing

3595 Old Conejo Road
Thousand Oaks
California 91320-2122
805 375-9262
805 375-9263 fax

August 5, 2016

Los Angeles Unified School District
333 S Beaudry Avenue, 22nd Floor
Los Angeles, California 90017

Work Order: 2880-29-I-100

Attention: Peyman Soroosh Moghadam

Subject: **Infiltration Evaluation, SOCES, 18605 Erwin Street, Reseda, California**

Reference: Gorian and Associates, Inc., June 30, 2015, *Preliminary Geotechnical Hazards Site Evaluation, Sherman Oaks Center for Enriched Studies Magnet School (SOCES), 18605 Erwin Street, Tarzana, California*. Work Order: 2880-29-0-100.

Presented herein are the results of infiltration testing at Sherman Oaks Center for Enriched Studies Magnet School (SOCES) in Tarzana / Reseda area of Los Angeles. The areas of proposed infiltration were provided by LAUSD personnel in the request for proposal. We understand the optimum system is surface infiltration such as through the use of permeable paving, thereby requiring testing at or near the surface. Low Impact Development and BMP (Best Management Practice) design is to be based on the findings presented herein.

1.0 SCOPE OF WORK

The scope of services described below was performed to provide infiltration testing and results for the proposed BMP design. This evaluation was conducted by or under the direct supervision of a State licensed geotechnical engineer and certified engineering geologist. Our evaluation was performed in two phases and included the following:

Field Exploration – Phase 1

To evaluate shallow infiltration five hand dug test pits were excavated in landscape areas at the approximate locations provided by LAUSD. The pits were approximately 1' x 1' x 1' at the approximate locations shown on the attached Location Map, Plate 1. Subsequently, infiltration testing was performed in the test pits. A geologist from this office logged the underlying materials and obtained bulk soil samples of the encountered materials. Directly after excavation water was added into the pits for pre-soaking. The pits were pre-saturated and tested according to the procedure outlined in the Infiltration Testing section.

Field Exploration – Phase 2

Based on the results of the Phase 1 testing and after consultation with LAUSD personnel two borings were excavated to depths of approximately 12½ feet, one (BI-1) with a limited access hollow-stem auger drill rig and one (BI-3) by hand augering, at the approximate locations shown on the attached Location Map, Plate 1. Subsequently, infiltration testing was performed in the borings. A geologist from this office logged the underlying materials and obtained Standard Penetration Test (SPT) soil samples at selected intervals from the drilled boring and bulk samples from the hand augered boring. The SPT samples were obtained using an automatic hammer weighing 140 pounds with a 30-inch drop.

The boring exploration locations were marked in the field and Underground Service Alert (USA) was contacted per State mandated protocol prior to excavation on the site.

At the conclusion of drilling and sampling the borings were converted to infiltration test wells. The wells were constructed by placing 2 inch diameter Schedule 40 PVC pipe in the boring; the upper 8 to 8½ feet of the pipe was non-perforated (blank) and the lower 5 feet of pipe was slotted (0.020"). The annular space between the pipe and the wall of the excavations was backfilled using a sand gravel mix from the bottom of the borings to above the screen section. An approximately 3-foot thick bentonite seal was placed at the top of the gravel section and the remaining annular space to the existing ground surface was then backfilled with native soil cuttings. Individual well development details are presented on the boring logs attached in Appendix A. After developing the infiltration test wells, the holes were pre-saturated and tested according to the procedure outlined in the Infiltration Testing section.

At the conclusion of testing the pipe was cut off below the ground surface and the borings backfilled with spoils from the boring cuttings. However, boring backfill may settle over time and the property owner or designated representative should periodically observe the boring locations and fill any depressions should they develop.

Laboratory Testing

A limited program of geotechnical laboratory testing was performed to evaluate geotechnical properties (hydrometer analyses) of selected earth material samples obtained during the subsurface exploration.

Engineering Analyses and Report Preparation

The results of the field and laboratory programs were used to determine the infiltration rate of the native soils in the vicinity of the proposed retention system(s). This report has been prepared to present our findings, conclusions and recommendations and includes:

- A description of soil and groundwater conditions, as encountered during the subsurface exploration, including logs of the exploratory borings and an exploration location map, Plate 1.
- A description of the laboratory testing program, including tests results.
- A summary of our infiltration test results and presentation of calculated infiltration rates.

2.0 SITE CONDITIONS

2.1 SITE LOCATION AND DESCRIPTION

The areas of the requested testing at SOCES are: the front lawn, the landscape area north of the auditorium building, the landscape area in the center of the buildings, near a playground east of the gymnasium, and the playfield north of the gymnasium. Test Pits T-1 through T-5 were excavated in these areas, respectively. The follow-up borings were performed in the front lawn area and the landscape area in the center of the buildings.

2.2 SUBSURFACE CONDITIONS

As encountered in our exploratory excavations the site is underlain by native alluvial deposits overlain by turf. General descriptions of the encountered earth materials are presented below with exploration specific descriptions presented on the attached logs of subsurface data (Appendix A).

Artificial fill was encountered in test pit T-3 and boring BI-3; Alluvial Deposits were encountered in all the excavations. As encountered the Alluvium generally consisted of silty sand and clayey sand interlayered with silty to sandy clay in a damp to very moist and medium dense or medium stiff condition.

2.3 GROUNDWATER

Groundwater was not encountered to the maximum depth explored of 14½ feet. Historical high groundwater is on the order of 10 feet below grade (CGS, 1998). Seasonal high groundwater should be lower; groundwater was encountered during the previous exploration in June 2015 at a depth of approximately 30 feet below ground surface.

2.4 GRAIN SIZE DISTRIBUTION

Grain size distribution analyses were performed on several samples. The grain size was evaluated by hydrometer analysis. Hydrometer analyses were performed using a 50-gram sample. A table summarizing the results is presented below.

HYDROMETER RESULTS

Exploration	Depth (feet)	% Sand	% Silt	% Clay	USCS Classification	USDA Soil Texture Classification
T-1	0-1	52	22	26	SC	Sandy Clay Loam
T-2	0-1	46	24	30	CL	Sandy Clay Loam
T-3	0-1	40	22	38	CL	Clay Loam
T-4	12"-14"	34	26	40	CL	Clay Loam
T-5	0-1	44	24	32	CL	Clay Loam
BI-1	9-10	44	26	30	CL	Clay Loam
BI-3	8-9	46	26	28	CL	Sandy Clay Loam

Published minimum infiltration rates for soils classified as clay loam are 0.09 inches per hour and for sandy clay loam are 0.17 inches per hour.

3.0 INFILTRATION TESTING AND RECOMMENDATIONS

3.1 GENERAL

After excavating the test pits and drilling the borings and developing the test wells as previously described, the test pits/wells were flooded (pre-saturated) with clear water. The following day, additional presoaking was performed and testing was run in general accordance with the *Los Angeles County Administrative Manual for Low Impact Best Management Practice* (2014) and *LAUSD Stormwater Technical Manual* (2009).

3.2 TEST PROCEDURE

Subsequent to the required presoaking each of the test wells was initially filled to the depth shown on the attached test sheets. After thirty minutes, the drop in water level was recorded and water added back to the initial water depth for the number of test cycles indicated on the Infiltration Testing Log. The pre-adjusted infiltration rate was calculated.

3.3 TEST RESULTS

Two of the test pits, T-2 and T-5, were not tested as the next day the water from the presoak was still present to the level of the presoak. Three test pits and two borings were tested. The test results were recorded in tabular form and are included in Appendix B. The measured rate was then adjusted to account for the discharge of water from both the sides and bottom of the hole to develop a representative infiltration rate. Infiltration tests in the test pits, near the surface, resulted in rates on the order of 1 inch per hour. Infiltration tests in borings BI-1 and BI-3 at a depth of approximately 12 feet bgs resulted in rates of on the order of 1 and 6 inches per hour, respectively.

3.4 INFILTRATION SYSTEM RECOMMENDATIONS

Based upon the hydrometer test results the minimum infiltration rates based on the soil classification indicate the onsite clayey soils are not suitable for infiltration. However the actual tests performed in the test pits and in the borings indicate the onsite soils in the areas of TP-1, TP-3 and TP-4 and the deeper soils tested in Borings BI-1 (adjacent TP-1) and BI-3 (adjacent TP-3) have an infiltration rate of on the order of 1 inch per hour. The infiltration rates were faster in the areas of TP-3, TP-4 and BI-3.

Shallow BMPs should not be located in the areas of TP-2 or TP-5. Additionally, infiltration BMPs should be located a minimum of 10 feet from building foundations. The City of Los Angeles guidelines would deem the site unsuitable for infiltration because infiltration water may saturate soils susceptible to liquefaction.

The sizing of the system and infiltration well or field construction should be specified by the project design civil engineer. Existing and proposed structures both on-site and off-site should be considered when selecting the location, depth and type of BMP. Input should be solicited from and data provided to the civil engineer, structural engineer and geotechnical engineer to optimize the design while minimizing the potential detrimental effects the addition of water could have on the subject site or adjacent sites. The plans and specifications should be provided to our office for review. Depending on actual design depth(s) and location(s) additional infiltration rate testing may be warranted.

4.0 CLOSURE

This report was prepared under the direction of a licensed geotechnical engineer and certified engineering geologist. No warranty, express or implied, is made as to conclusions and professional advice included in this report. Gorian and Associates, Inc. disclaim any and all responsibility and liability for problems that may occur if the recommendations presented in this report are not followed.

This report was prepared for LAUSD and their design consultants solely for the design and construction of the development described herein. This report may not contain sufficient information for other uses or the purposes of other parties. These recommendations should not be extrapolated to other areas or used for other facilities without consulting Gorian and Associates, Inc.

The recommendations are based on interpretations of the subsurface conditions concluded from information gained from subsurface explorations and a surficial site reconnaissance. The interpretations may differ from actual subsurface conditions that can vary horizontally and vertically across the site. Due to possible subsurface variations, representatives of this office should observe all aspects of field construction addressed in this report.

Any person using this report for bidding or construction purposes should perform such independent investigations as they deem necessary.

We recommended all earthwork be observed and tested by the project geotechnical consultant including site stripping, removals and placement of compacted fill. The work should be performed per the current applicable Building Code. However, the services of the geotechnical consultant should not be construed to relieve the owner or contractors of their responsibilities or liabilities.

-o0o-

We appreciate the opportunity to submit this geotechnical report and look forward to continuing our service on the project design and construction team. Please call if you have any questions concerning this report, or require any additional information.

Respectfully submitted,

GORIAN AND ASSOCIATES, INC.

Sheryl N. Shatz, GE 2288
Senior Geotechnical Engineer

SHERYL N. SHATZ
No. 2288

William F. Cavan, Jr., CEG 1161
Principal Engineering Geologist

WILLIAM F. CAVAN, JR.
No. EG1161
CERTIFIED ENGINEERING GEOLOGIST
EXP 9/30/17

Distribution: Addressee (3) + via e-mail

Attachments:	Plate 1	Infiltration Location Map
	Appendix A	Logs of Subsurface Data
	Appendix B	Infiltration Test Results

Reference:

California Division of Mines and Geology (CDMG) [now California Geological Survey (CGS)], 1998, *Seismic Hazard Zones Report for the Canoga Park 7.5 Minute Quadrangle, Los Angeles County. Revised 2001, 2005.* CGS Seismic Hazard Zone Report 07. Viewed online: < http://gmw.consrv.ca.gov/shmp/download/quad/CANOGA_PARK/reports/canpk_eval.pdf >.

BUILDING KEY

		YB	FCI
1	AUDITORIUM BUILDING	1954	42.8 %
2	CAFETERIA BUILDING	1954	45.1 %
3	STUDENT STORE BUILDING	1954	58.2 %
4	CHORAL MUSIC BUILDING	1954	71.9 %
5	INSTRUMENTAL MUSIC BUILDING	1954	67.9 %
6	INDUSTRIAL ARTS BUILDING 1	1954	63.8 %
7	INDUSTRIAL ARTS BUILDING 2	1954	57.8 %
8	CLASSROOM BUILDING A	1954	64.9 %
9	CLASSROOM BUILDING B	1954	74.9 %
10	CLASSROOM BUILDING C	1954	79.0 %
11	LIBRARY BUILDING	1954	71.2 %
12	COUNDELIMG BUILDING	1954	58.5 %
13	ADMINISTRATION BUILDING	1954	68.1 %
14	SANITARY BUILDING D	1954	50.2 %
15	ARTS AND CRAFTS BUILDING E	1954	38.8 %
16	CLASSROOM BUILDING F	1954	58.9 %
17	HOMEMAKING BUILDING G	1954	72.2 %
18	CLASSROOM BUILLDING H	1954	52.0 %
19	CLASSROOM BUILDING J	1954	72.5 %
20	CLASSROOM BUILDING K	1954	70.6 %
21	CLASSROOM BUILDING G	1954	92.1 %
22	CLASSROOM BUILDING M	1954	93.4 %
23	CLASSROOM BUILDING N	1956	88.1 %
24	PHYSICAL EDUCATION BUILDING	1953	59.3 %
25	LATH HOUSE	1954	81.0 %
26	AGRICULTURAL CLASSROOM	1954	71.7 %
27	BUILDING	1954	50.5 %
28	UTILITY BUILDING	1954	62.5 %
29	GARDENERS TOOL SHED	1954	26.2 %
30	STORAGE UNIT	1969	60.0%
31	TWO / THREE UNIT RELOCATABLE	1972	93.0 %
32	TWO / THREE UNIT RELOCATABLE	1955	
33	GUIDANCE CENTER BUILDING	1961	89.0 %
34	TWO / THREE UNIT RELOCATABLE	1981	97.0 %
35	TWO UNIT RELOCATABLE (NO DSA #)	1999	90.0 %
36	SINGLE UNIT MODULAR (NO DSA #)	2000	90.0 %
37	SINGLE UNIT MODULAR (NO DSA #)	2000	90.0 %

ENROLLMENT

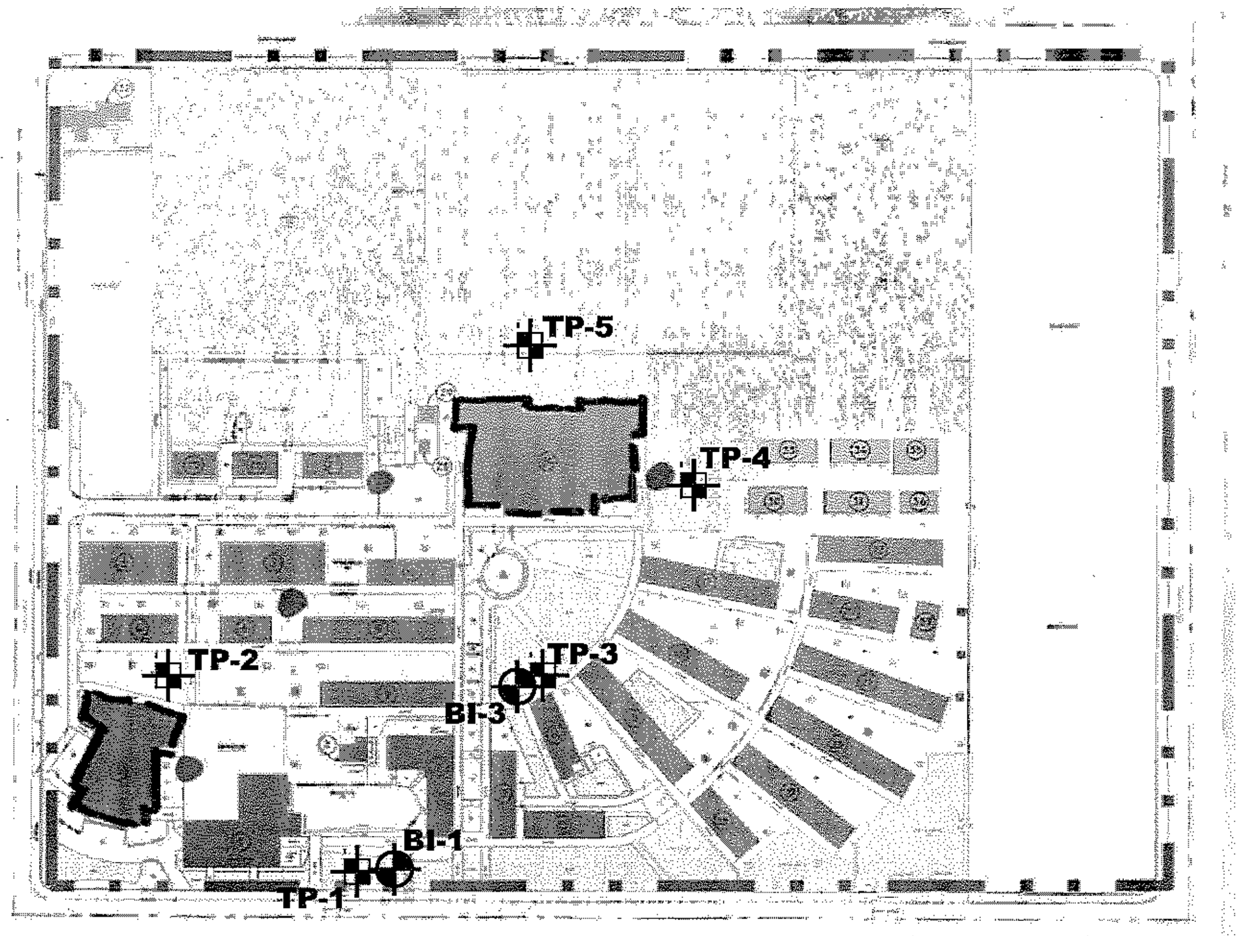
- CURRENT ENROLLMENT = 2092
- PROJECTED ENROLLMENT = 2076
- CAPACITY = 2189

CLASSROOM COUNT

PERMANENT SMALL CLASSROOM	= 2
PERMANENT STANDARD CLASSROOMS	= 50
PORTABLE SMALL CLASSROOMS	= 2
PORTABLE STANDARD CLASSROOMS	= 10
TOTAL NUMBER OF CLASSROOMS	64

UNDERSIZED CORE:

LIBRARY UNDERSIZED BY 50% (2,800 SF)
FOOD SERVICE UNDERSIZED BY 25% (1,000 SF)



LEGEND

- ▨ PERMANENT BUILDING
- ■ PORTABLE BUILDING
- ▨ SEISMIC EVALUATION REQUIRED

EXISTING PARKING: 101 STALLS + 18 BUS STALLS
PARKING REQUIRED BASED ON PLANNING CAPACITY: 164 STALLS

SOCES
18605 Erwin Street
Reseda, CA 91335

Existing Campus Conditions

EXPLANATION

BI-3 ⊕ Approximate Location of Infiltration Boring

TP-5 ✚ Approximate Location of Infiltration Test Pit

North

GEOTECHNICAL EXPLORATION MAP

Gorian & Associates, Inc. *Applied Earth Sciences*		
Job No: 2880-29-I-100		Date: Aug. 2016
Scale: 1" = 200'	Drawn by: Approved by:	PLATE 1

APPENDIX A

LOGS OF SUBSURFACE DATA

GORIAN
& ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation
Number: T-1

Page Number: 1

Date(s) Excavated 6/14/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 12"x12"x14"	Equipment Contractor Hand Excavated	Equipment Type	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0	■					CL/ SC	▨	ALLUVIUM: Brown sandy CLAY to clayey SAND (very moist, stiff to medium dense). Roots.	
1							▨		
								Total Depth 14" No caving No groundwater	
2									
3									
4									
5									
6									
7									

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation
Number: T-2

Page Number: 1

Date(s) Excavated 6/14/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 12"x12"x14"	Equipment Contractor Hand Excavated	Equipment Type	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0 1	■					CL	▨	ARTIFICIAL FILL: Brown sandy CLAY (damp to moist, very stiff). Mottled. Some asphaltic concrete clasts.	
2 3 4 5 6 7								Total Depth 14" No caving No groundwater	

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation
Number: T-3

Page Number: 1

Date(s) Excavated 6/14/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 12"x12"x14"	Equipment Contractor Hand Excavated	Equipment Type	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0	■					CL	▨	ARTIFICIAL FILL: Yellowish brown sandy CLAY, trace fine sand (moist to very moist, stiff). Mottled.	
								Total Depth 14" No caving No groundwater	

GORIAN & ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation Number: T-4

Page Number: 1

Date(s) Excavated 6/14/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 12"x12"x14"	Equipment Contractor Hand Excavated	Equipment Type	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0	■					SM	▦	ARTIFICIAL FILL: Brownish yellow silty fine to coarse SAND (damp, loose).	
1	■					CL	▨	Yellowish brown silty CLAY, trace fine sand (moist, stiff).	
								Total Depth 14" No caving No groundwater	
2									
3									
4									
5									
6									
7									

GORIAN & ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation
Number: T-5

Page Number: 1

Date(s) Excavated 6/14/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 12"x12"x14"	Equipment Contractor Hand Excavated	Equipment Type	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0	■					CL	▨	ARTIFICIAL FILL: Dark gray sandy CLAY (damp, very stiff). Some asphaltic concrete clasts.	
1									
								Total Depth 14" No caving No groundwater	
2									
3									
4									
5									
6									
7									

GORIAN & ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation
Number: BI-1 (T-1)

Page Number: 1

Date(s) Excavated 6/20/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 7½"	Equipment Contractor Discovery Drilling	Equipment Type LAR - Cathead	Hammer Data Auto 140# 30" Drop

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0						CL	▨	ALLUVIUM: Dark brown sandy CLAY, trace fine sand (very moist, soft).	
	■	◢	1/2/1			SC	▨	Yellowish brown clayey fine SAND (very moist, very loose).	
5		◢	2/2/2			SM	▥	Yellowish brown to brownish yellow silty fine SAND, trace clay (moist, loose).	
10		◢ ◢ ◢	3/5/5 2/3/4 2/3/6			CL	▨	Yellowish brown sandy CLAY, some silt (very moist, stiff). Common calcium carbonate veinlets. Below 9'; becoming medium stiff.	
		◢	4/3/3			SC	▨	Yellowish brown clayey fine to medium SAND (moist, loose).	
15								Total Depth 14½' No caving No groundwater Boring developed as infiltration test well Lower 2' backfilled with clay soil cuttings -12.5' to -7.5'(5'); 2" diameter slotted pvc (0.02) -7.5' to +1.5' (8.5'); Blank pvc -12.5' to -5.5'; "Special Blend" sand used (coarse sand to pea gravel) -5.5' to 2-5'; Bentonite (Hydrated) -2.5' to G.S.; Native Backfill	
20									
25									
30									
35									

GORIAN
& ASSOCIATES, INC.

Project: Los Angeles Unified School District
SOCES

Work Order: 2880-29-I-100

SUBSURFACE LOG

Excavation Number: BI-3 (T-3)

Page Number: 1

Date(s) Excavated 6/21/16	Logged By CHD	Excavation Location See Map	Approximate Surface Elevation
Excavation Dimension 4½"	Equipment Contractor	Equipment Type Hand Auger	Hammer Data

Elevation / Depth (ft.)	Bulk	Sample Type	Blow Counts	Moisture Content (% dry weight)	Dry Density (pcf)	USCS	Soil / Lithology	Description	Remarks
0	■					CL	▨	ARTIFICIAL FILL: Yellowish brown sandy CLAY (very moist, stiff). Mottled.	
5	■					SM	▦	ALLUVIUM: Dark brown silty fine SAND, trace clay (moist, loose).	
	■					SM/ CL	▩	Yellowish brown to brownish yellow clayey, silty fine SAND to sandy silty CLAY (moist, loose to soft).	
10	■					CL	▨	Yellowish brown silty CLAY, trace fine sand (moist, stiff). Some calcium carbonate veinlets.	
15 20 25 30 35								Total Depth 12½' No caving No groundwater Boring developed as infiltration test well -12.5' to -7.5'(5'); 2" diameter slotted pvc (0.02) -7.5' to +.5' (8'); Blank pvc -12.5' to -6'; "Special Blend" sand used (coarse sand to pea gravel) -6' to -3'; Bentonite (Hydrated) -3' to G.S.; Native Backfill	

KEY TO SYMBOLS

Symbol	Description
Strata symbols	
▨	Low plasticity clay
▥	Silty sand
▩	Sandy Clay and Silty Sand
□	Blank
Soil Samplers	
■	California sampler

Notes:

1. Exploratory borings were drilled on 6/21/16 using a 4-inch diameter continuous flight power auger.

2. No free water was encountered at the time of drilling or when re-checked the following day.

3. Boring locations were taped from existing features and elevations extrapolated from the final design schematic plan.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

5. Results of tests conducted on samples recovered are reported on the logs.

APPENDIX B

INFILTRATION TEST RESULTS

INFILTRATION TESTING

InfiltrationTesting Field Log

Work Order: 2880-29-I-100
Date 6/15/2016

Project Location	SOCES	Trench/Test Number	T-1
Earth Description	sa clay to cl sand	Trench dimensions	1' x 1' x 1.2'
Tested By	CHD/CJH	Depth of Trench	1.2 feet
Liquid Description	clean water	Casing Dimensions	
Measurement Method	tape	Depth to Water Table	30 feet
Depth to Invert of BMP		Depth to Initial Water Depth	2
Time Interval Standard:		Initial Water Depth (d_1) (inches)	12
Start Time for Pre-Soak	06/14/16	Water Remaining in Boring (Y/N)	y
Start Time for Standard	06/15/16	Std Time Interval Btween Rdngs	30 min

Reading Number	Time Start / End (hh:mm)	Elapsed Time Δ time (mins)	Water Drop During Standard Time Interval, Δd		Percolation Rate for Reading (in / hr)	Soil Description/ Notes/Comments
			(feet)	(inches)		
1	8:03 8:33	30		1.75	3.50	
2	8:33 9:03	30		1.50	3.00	
3	9:03 9:33	30		1.50	3.00	
4	9:33 10:03	30		1.25	2.50	
5	10:03 10:33	30		1.25	2.50	
6	10:33 11:03	30		1.25	2.50	
7	11:03 11:33	30		1.25	2.50	
8	11:33 12:03	30		1.25	2.50	
			average rate		2.50	

Reduction Factor, R_f = $\left[\frac{2d_1 - \Delta d}{13.5}\right]+1$ = 2.69

Infiltration Rate = (Percolation Rate) / (Reduction Factor) 0.93 in / hour

INFILTRATION TESTING

InfiltrationTesting Field Log

Work Order: 2880-29-I-100
Date 6/15/2016

Project Location	SOCES	Trench/Test Number	T-3
Earth Description	sandy clay	Trench dimensions	1' x 1' x 1.2'
Tested By	CHD/CJH	Depth of Trench	1.2 feet
Liquid Description	clean water	Casing Dimensions	
Measurement Method	tape	Depth to Water Table	30 feet
Depth to Invert of BMP		Depth to Initial Water Depth	2
Time Interval Standard:		Initial Water Depth (d_1) (inches)	12
Start Time for Pre-Soak	06/14/16	Water Remaining in Boring (Y/N)	n
Start Time for Standard	06/15/16	Std Time Interval Btween Rdngs	30 min

Reading Number	Time Start / End (hh:mm)	Elapsed Time Δ time (mins)	Water Drop During Standard Time Interval, Δd		Percolation Rate for Reading (in / hr)	Soil Description/ Notes/Comments
			(feet)	(inches)		
1	8:10 8:40	30		2.00	4.00	
2	8:40 9:10	30		1.75	3.50	
3	9:10 9:40	30		1.75	3.50	
4	9:40 10:10	30		1.75	3.50	
5	10:10 10:40	30		1.75	3.50	
6	10:40 11:10	30		1.50	3.00	
7	11:10 11:40	30		1.50	3.00	
8	11:40 12:10	30		1.50	3.00	
			average rate		3.00	

Reduction Factor, $R_f = \left[\frac{2 d_1 - \Delta d}{13.5}\right] + 1 \quad = \quad 2.67$

Infiltration Rate = (Percolation Rate) / (Reduction Factor) 1.13 in / hour

GORIAN AND ASSOCIATES, INC.

INFILTRATION TESTING

InfiltrationTesting Field Log

Work Order: 2880-29-I-100
Date 6/15/2016

Project Location	SOCES	Trench/Test Number	T-4
Earth Description	silty clay	Trench dimensions	1' x 1' x 1.2'
Tested By	CHD/CJH	Depth of Trench	1.2 feet
Liquid Description	clean water	Casing Dimensions	
Measurement Method	tape	Depth to Water Table	30 feet
Depth to Invert of BMP		Depth to Initial Water Depth	2
Time Interval Standard:		Initial Water Depth (d_1) (inches)	12
Start Time for Pre-Soak	06/14/16	Water Remaining in Boring (Y/N)	n
Start Time for Standard	06/15/16	Std Time Interval Btween Rdngs	30 min

Reading Number	Time Start / End (hh:mm)	Elapsed Time Δ time (mins)	Water Drop During Standard Time Interval, Δd		Percolation Rate for Reading (in / hr)	Soil Description/ Notes/Comments
			(feet)	(inches)		
1	8:15 8:45	30		2.50	5.00	
2	8:45 9:15	30		2.00	4.00	
3	9:15 9:45	30		1.75	3.50	
4	9:45 10:15	30		1.75	3.50	
5	10:15 10:45	30		1.75	3.50	
6	10:45 11:15	30		1.75	3.50	
7	11:15 11:45	30		1.75	3.50	
8	11:45 12:15	30		1.75	3.50	
			average rate		3.50	

Reduction Factor, $R_f = \left[\frac{2\,d_1 - \Delta d}{13.5}\right] + 1$ = 2.65

Infiltration Rate = (Percolation Rate) / (Reduction Factor) 1.32 in / hour

GORIAN AND ASSOCIATES, INC.

INFILTRATION TESTING

Boring InfiltrationTesting Field Log

Work Order: 2880-29-I-100
Date 6/22/2016

Project Location	SOCES front lawn	Boring/Test Number	BI-1	
Earth Description	sa clay to cl sand	Diameter of Boring (DIA)	7.5	inches
Tested By	CJH	Depth of Boring	12.5	feet
Liquid Description	clean water	Length of Casing	13.6	feet
Measurement Method	water level meter	Diameter of Casing	2"	
Depth to Invert of BMP		Depth to Water Table	30	feet
Time Interval Standard:		Depth to Initial Water Depth	0	feet
Start Time for Pre-Soak	6/21/2016	Initial Water Depth (d_1) (inches)	150	
Start Time for Standard	6/22/2016	Water Remaining in Boring (Y/N)	y	
		Std Time Interval Btween Rdngs	30 min	

Reading Number	Time Start / End (hh:mm)	Elapsed Time Δ time (mins)	Water Drop During Standard Time Interval, Δd		Percolation Rate for Reading (in / hr)	Soil Description/ Notes/Comments
			(feet)	(inches)		
1	7:23 7:53	30	6.6	79.20	158.40	refilled to ground surface
2	7:53 8:23	30	4.4	52.80	105.60	refilled to ground surface
3	8:23 8:53	30	3.1	37.20	74.40	refilled to ground surface
4	8:53 9:23	30	2.9	34.80	69.60	refilled to ground surface
5	9:23 9:53	30	2.6	31.20	62.40	refilled to ground surface
6	9:53 10:23	30	2.3	27.60	55.20	refilled to ground surface
7	10:23 10:53	30	2.2	26.40	52.80	refilled to ground surface
8	10:53 11:23	30	2.1	25.20	50.40	refilled to ground surface
9						
			rate of last reading		50.40	

Reduction Factor, R_f = $\left[\frac{2\,d_1 - \Delta d}{DIA}\right]+1$ = 37.64

Infiltration Rate = (Percolation Rate) / (Reduction Factor) 1.34 in / hour

GORIAN AND ASSOCIATES, INC.

INFILTRATION TESTING

Boring InfiltrationTesting Field Log

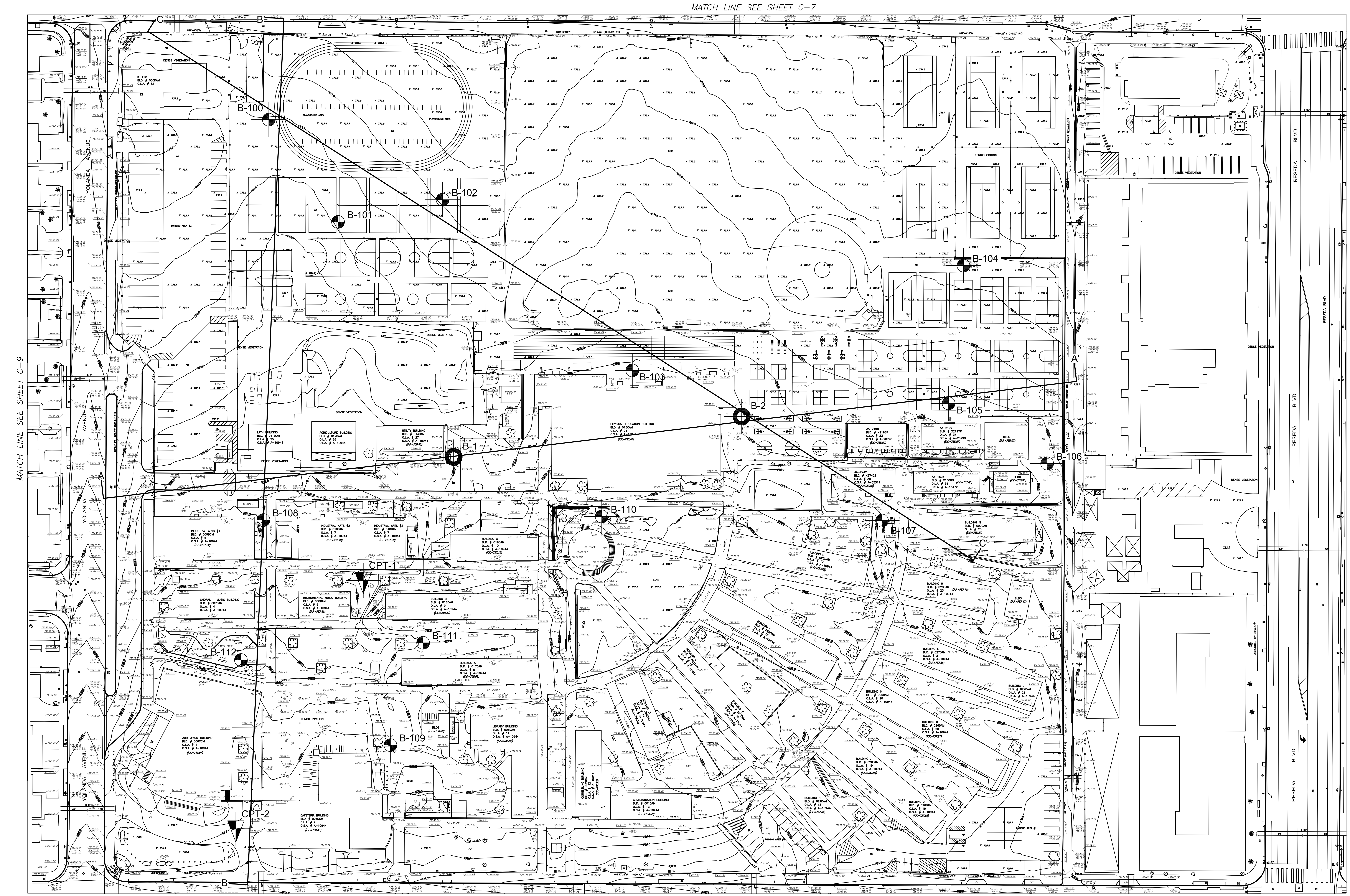
		Work Order:	2880-29-I-100	
		Date	6/22/2016	
Project Location	SOCES central quad	Boring/Test Number	BI-3	
Earth Description		Diameter of Boring (DIA)	4.5	inches
Tested By	CJH	Depth of Boring	12.5	feet
Liquid Description	clean water	Length of Casing	13.2	feet
Measurement Method	water level meter	Diameter of Casing	2"	
Depth to Invert of BMP		Depth to Water Table	30	feet
Time Interval Standard:		Depth to Initial Water Depth	0	feet
Start Time for Pre-Soak	6/21/2016	Initial Water Depth (d_1) (inches)	150	
Start Time for Standard	6/22/2016	Water Remaining in Boring (Y/N)	y	
		Std Time Interval Btween Rdngs	30 min	

Reading Number	Time Start / End (hh:mm)	Elapsed Time Δ time (mins)	Water Drop During Standard Time Interval, Δd		Percolation Rate for Reading (in / hr)	Soil Description/ Notes/Comments
			(feet)	(inches)		
1	7:23 7:53	30	11.2	134.40	268.80	refilled to ground surface
2	7:53 8:23	30	10.9	130.80	261.60	refilled to ground surface
3	8:23 8:53	30	10.8	129.00	258.00	refilled to ground surface
4	8:53 9:23	30	10.6	127.20	254.40	refilled to ground surface
5	9:23 9:53	30	10.6	127.20	254.40	refilled to ground surface
6	9:53 10:23	30	10.6	126.60	253.20	refilled to ground surface
7	10:23 10:53	30	10.5	125.40	250.80	refilled to ground surface
8	10:53 11:23	30	10.5	125.40	250.80	refilled to ground surface
9						
			average rate		250.80	

Reduction Factor, R_f = $\left[\frac{2\ d_1 - \Delta d}{DIA}\right]+1$ = 39.80

Infiltration Rate = (Percolation Rate) / (Reduction Factor) 6.30 in / hour

GORIAN AND ASSOCIATES, INC.



GRAPHIC SCALE
25 0 25 50 100
(IN FEET)
1 inch = 50 ft.

EXPLANATION

B-112	Approximate Location of Exploratory Boring (Gorian 2016)
B-2	Approximate Location of Exploratory Boring (Gorian 2015)
CPT-2	Approximate Location of Cone Penetrometer Sounding (Gorian 2016)
C C'	Approximate Location of Geotechnical Cross Section

GEOTECHNICAL EXPLORATION MAP

Gorian & Associates, Inc.
Applied Earth Sciences

Job No: 2880-29-2-100		Date: Oct. 2016
Scale: 1" = 50'	Drawn by: Approved by:	PLATE 1

LOS ANGELES UNIFIED SCHOOL DISTRICT
DESIGN AND A/E
TECHNICAL SUPPORT
FACILITIES SERVICES DIVISION
333 S. BEAUDRY AVENUE, 23DS FLOOR
LOS ANGELES, CALIFORNIA 90017
Tel: (213)241-4254
Fax: (213)241-4199

PROJECT TITLE AND SCHOOL LOCATION

SHERMAN OAKS CENTER FOR
ENRICHED STUDIES

18605 ERWIN STREET
RESEDA, CALIFORNIA 91335

COMMISSIONED ARCHITECT

CONSULTANT

O:\Survey\STANDARDS\Culver\2015\TCG Logo.jpg

14841 Yorba Street, Suite 201
Tustin, California, 92780
(714) 389–7330 Fax (714) 389–7331

STAMPS/SEALS

DIVISION OF THE STATE ARCHITECT

△
△
△
△

SHEET TITLE:

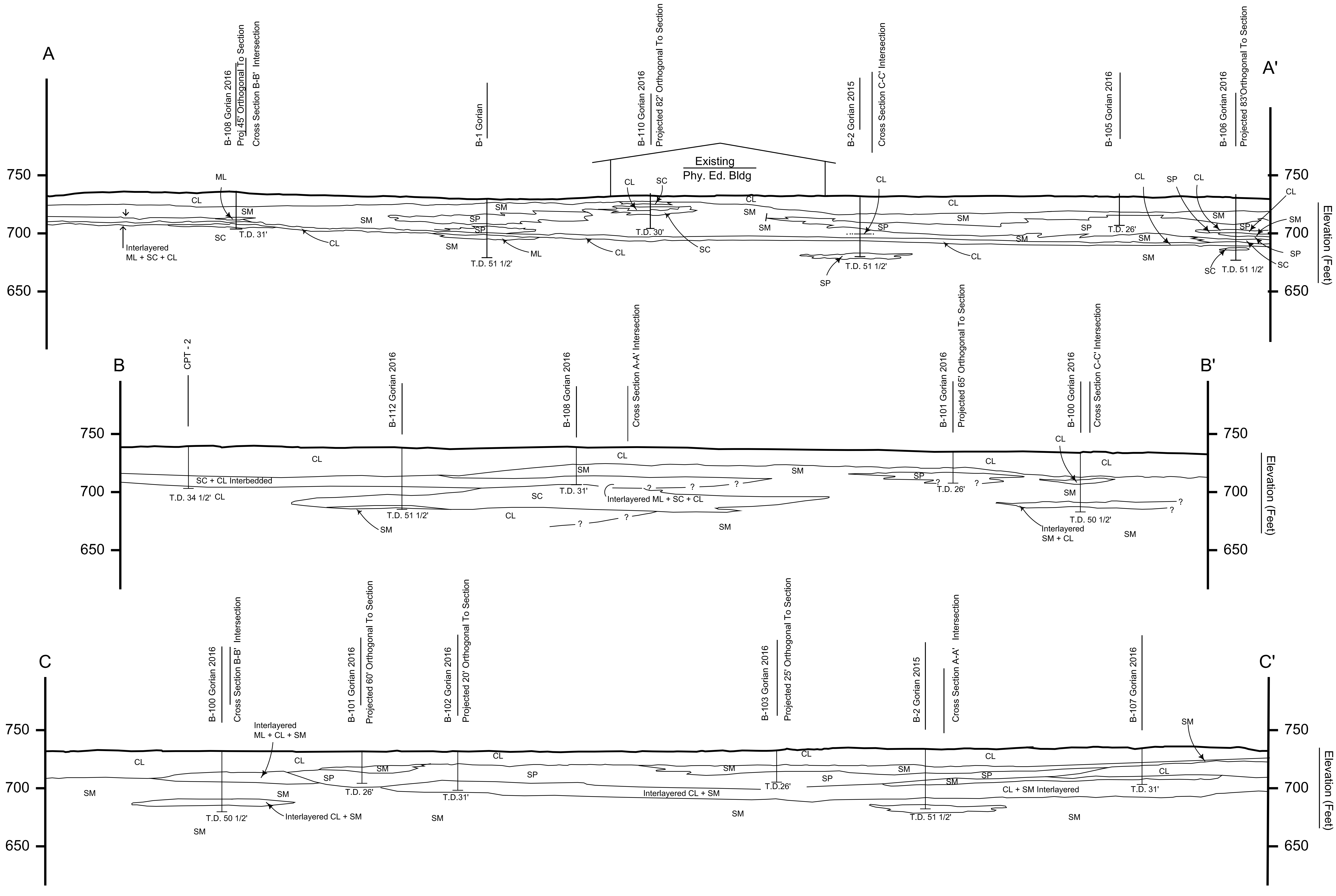
TOPOGRAPHIC SURVEY

PROJECT NO.: LAU36-18	PROJECT ARCH:
DRAWN: KT	CHECKED: JG

SHEET NUMBER

C-10

DATE: 6/09/2016	SHEET: 10 OF: 10



Gorian & Associates, Inc.
Applied Earth Sciences

Job No: 2880-29-2-100		Date: Oct. 2016
Scale: 1" = 50'	Drawn by: Approved by:	PLATE 2

LAUSD-SOCES
18605 Erwin Street
Reseda, California

GEOTECHNICAL CROSS SECTION A-A', B-B', C-C'

All Sections:
Horz: 1" = 50'
Vert: 1" = 50'

Appendix D.

Phase I Environmental Site Assessment

Environmental Excellence

Eco & Associates, Inc. ▪ 1855 W. Katella Ave. ▪ Suite 340 ▪ Orange ▪ CA ▪ 92867 ▪ phone (714) 289-0995 ▪ fax (714) 289-0965

July 21, 2016

Mr. Eric Longenecker
Site Assessment Project Manager
Contract Professional
Office of Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, 28-129-03
Los Angeles, CA 90017

Subject: Submittal of the Final Phase I Environmental Site Assessment Report and the Preliminary Endangerment Assessment (PEA) Workplan Letter Report for 18605 Erwin Street, Reseda, CA 91335; Assessor Parcel No: 2127-012-900

Dear Mr. Longenecker:

Eco & Associates, Inc. has prepared the following enclosed reports for the Los Angeles Unified School District property at 18605 Erwin Street in Reseda, California for your records:

1. Final Phase I Environmental Site Assessment (ESA) Report
2. Final PEA Workplan Letter Report

The Phase I ESA Report is paper-bound into a three-ring binder. The PEA Workplan is stapled together and included in the front pocket within the binder. The reports are also provided in PDF on the CD-ROM included within the binder. All sections of the reports on CD are bookmarked in the PDF for easy access.

Note that Appendix C (Environmental Database Review) of the Phase I report is provided on the CD-ROM included with this report.

If you have any questions regarding this report, please contact us at (714) 289-0995.

Sincerely,
Eco & Associates, Inc.

Mohammad Estiri, PhD
Project Director

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

•FINAL•

18605 Erwin Street
Reseda, California 91335

Assessor Parcel No. 2127-012-900

Prepared for:
Office of Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, 21-220-02
Los Angeles, California 90017

Prepared by:
Eco & Associates, Inc.
1855 W. Katella Avenue, Suite 340
Orange, California 92867
Phone: (714) 289-0995
Fax: (714) 289-0965

Environmental Excellence

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT REPORT

•FINAL•

18605 Erwin Street
Reseda, California 91335

Assessor Parcel No.: 2127-012-900

Prepared for:

Office of Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, 21-220-02
Los Angeles, California 90017

Prepared by:

Eco & Associates, Inc.
1855 W. Katella Avenue, Suite 340
Orange, California 92867

Mohammad Estiri, Ph.D.
Project Director

Quin Kinnebrew
Quin Kinnebrew, PG, #5696
Project Geologist

July 21, 2016

Project No: Eco-16-711

TABLE OF CONTENTS

TABLES ***(from report text)***

FIGURES

APPENDICES

ABBREVIATIONS, ACRONYMS, & SYMBOLS

APN	assessor parcel number
ASTM	American Society for Testing and Materials
CDWR	California Department of Water Resources
DOGGR	Division of Oil, Gas, and Geothermal Resources
DTSC	Department of Toxic Substances Control
Eco	Eco & Associates, Inc.
EDR®	Environmental Data Resources, Inc.
ESA	Environmental Site Assessment
HAZNET	Hazards Network
LACDPW	Los Angeles County Department of Public Works
LAUSD	Los Angeles Unified School District
OEC	Other Environmental Condition
PCB	Polychlorinated biphenyl
RCRA-LQG	Resource Conservation and Recovery Act - Large Small Quantity Generator
REC	recognized environmental condition
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SOCES	Sherman Oaks Center for Enriched Studies
USGS	United States Geological Survey

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) was conducted in general conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard E1527-13. The purpose of this assessment was to determine if recognized environmental conditions (RECs) were present within the school property located at 18605 Erwin Street, in the community of Reseda, California (the “Site”). RECs are the presence or likely presence of hazardous material releases within a property. A review of the site conditions at the time of this assessment, the Site’s background, and a summary of potential RECs at the Site are provided below.

SITE DESCRIPTION

At the time of this assessment, the Site was occupied by the Sherman Oaks Center for Enriched Studies (SOCES). This school is comprised of approximately 21.5 acres of land. Classroom buildings for this school were located throughout the Site’s southern portion. Other buildings within this portion of the Site were being utilized as administrative offices, counseling, nursing, a library, a cafeteria, an auditorium, equipment storage, and a gym. A relatively small transportation office building was also located in the Site’s northwestern corner.

The on-site buildings were typically adjoined by concrete-paved sidewalks with arcades. The areas between the buildings and sidewalks were generally paved with asphalt. Well-established trees were located locally throughout these paved areas.

Grass lawns were located along the Site’s southern side, in a relatively large sports field in the Site’s north-central portion, and in an area adjoining a circular stage at the center of the campus. Paved ball courts occupied relatively large areas within the Site’s northeastern and northwestern portions. Asphalt-paved parking lots were located in the Site’s northwestern and southeastern portions.

FINDINGS AND CONCLUSIONS

Site Background

Based on data collected during this assessment, the Site was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a large field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was constructed in the Site’s northwestern corner (existing transportation office). Four single-family dwellings were constructed in the Site’s southern portion during this period. These four southern dwellings were removed in between 1953 and 1954. All of the on-site buildings, with the exception of the portable classrooms and pre-existing northwestern building were constructed in 1954. The sidewalks, canopies, pavement between the buildings, and paved ball courts in the Site’s northeastern and northwestern portions were also constructed in 1954. The school operated as Sequoia Junior High School between 1954 and 1981. It has been in use as SOCES since 1981. With the exception of modular buildings in the Site’s eastern portion, the on-site buildings have been in a similar state since 1954.

Recognized Environmental Conditions

Recognized environmental conditions were not identified within the Site during this assessment. Historical RECs were also not identified at the Site. Historical RECs refer to a past release that has been remediated to below “residential” standards and given regulatory closure with no use restrictions.

Other Environmental Conditions (OECs) were identified within the Site during this assessment. OECs or potential RECs are features or issues that, while being judged to have a relatively low probability of resulting in significant impact to the Site, should be considered in project planning and risk management. The OECs listed below were identified at the Site.

- **Lead-based Paint.** With the exception of five of the newer portable buildings (installed after 1977) on the site’s eastern side, it is considered likely that the paint on the buildings contains or formerly contained elevated lead concentrations. Due to its slow deterioration with time, the paint typically flakes off and accumulates in the adjoining soils. This can result in elevated lead concentrations in the soil adjoining older buildings. Note that the on-site buildings have been mostly adjoined by pavement since 1954. As such, the potential that the soils underlying this pavement have been impacted with lead is considered relatively low. Relatively high lead concentrations, however, are anticipated in the planters that contain trees between the buildings, or any other unpaved areas adjoining the buildings.

  Although the former on-site dwellings were less than 7 years of age, there is a potential that leaded paint dust and fragments were generated during their demolition in approximately 1954. These former dwellings were located adjacent to the auditorium and Classroom Buildings D, E, and H.

- **Pesticides.** As noted above, the Site was in periodic agricultural use (fields) in the 1930s and 1940s. As such, it is considered possible that persistent pesticides were formerly used within the Site, and may have impacted the surficial soils. Due to the lack of orchards and row crops, which are relatively heavy users of pesticides, elevated pesticide concentrations (greater than regulatory levels) are not anticipated at the Site.

- **Arsenic-Based Herbicide.** It was formerly common practice for the LAUSD to apply an arsenic-based herbicide to soil immediately prior to paving with asphalt. As such, there is a potential that elevated arsenic concentrations (greater than background levels) are present in the soils immediately underlying the paved portions of the site.

- **Transformers.** Nine electric transformers were documented at the Site. Due to the age of most of these transformers, it is considered possible that they contain polychlorinated biphenyls (PCBs). Electric transformers were observed within the Site at six locations. Three additional transformers were reported in three rooms not entered during this assessment. The locations of these transformers are as follows.
  - Classroom Building D, exterior east side
  - Classroom Building J, interior north side (per building plans)
  - Classroom Building L, interior west side

  - Classroom Building N, exterior east side (relatively new transformer)
  - Administration Building, exterior north side
  - Library Building, exterior west side
  - Open area east of cafeteria
  - Auditorium, second floor on north side (per building plans)
  - Western Industrial Arts Building, on second floor (per building plans)

  Transformer oil releases were not observed beneath or adjacent to any of the transformers reviewed at the time of this assessment. Only two of the transformers were located adjacent to exposed soil (west side of library and in open area east of cafeteria). The remaining transformers were located on concrete foundations that adjoined paved areas, or located within the second floor of a building.

- **Flammable Materials Storage Room.** Two 55-gallon drums of gasoline and one 55-gallon drum of diesel were observed in a flammable materials storage room on the eastern side of the Utility Building. Three additional 5-gallon fuel containers (all empty) were also observed in this room. Indications of releases from these fuel containers were not evident at the time of this assessment. A drain hole located in the southern portion of this room would have drained the fuel from the floor of this room to the underlying soil (based on down-hole observation) in the event of a significant release.

- **Incinerator.** A trash incinerator is located immediately east of the Utility Building. This incinerator is located within a walled compound that was surfaced with concrete. Indications of staining, melted materials, or other potentially hazardous material releases were not observed around the incinerator area. The incinerator in this compound did not appear to have been utilized significantly after it was installed in 1954.

- **Spray Booth.** A permit to operate a paint and/or solvent spray booth was granted at the Site in 1968. The location of this booth was not ascertained at the time of this assessment. It is suspected of being utilized in the western Industrial Arts Building, where the original building plans show such as structure. The improper use of such structures can result in the spillage of solvents, which can seep through concrete foundations and into the underlying soils. Due to the limited use of this structure (not utilized to the extent that commercial paint booths are used), the potential that solvents have impacted the underlying soils is relatively low.

Regional Hazardous Material Releases

Based on a review of properties within the site vicinity and data made available during this assessment, there is a relatively low potential that contaminants from upgradient properties have impacted the soil and/or groundwater underlying the Site.

RECOMMENDATIONS

The following recommendations are based on the findings and conclusions presented above.

- **Lead-Based Paint.** Prior to disturbing soil in planned construction areas, it is recommended that representative soil samples be collected within these areas and analyzed for lead. The results of this investigation should be used to determine if the lead concentrations in soil in these areas are a potential threat to human health.
- **Arsenic.** Prior to disturbing asphalt in planned construction areas, it is recommended that representative soil samples be collected beneath the asphalt within these areas and analyzed for arsenic. The results of this investigation should be used to determine if the arsenic concentrations in soil in these areas are a potential threat to human health
- **Pesticides.** In order to confirm the absence of pesticides within planned construction areas, it is recommended that representative soil samples be collected within these areas and analyzed for chlorinated pesticides.
- **Transformers.** If future construction activities encroach into the immediate vicinity of pad-mounted transformers, it is recommended that the adjoining soils be assessed for the possible presence of PCBs prior to disturbing the soil around the transformer. The results of this investigation should be used to determine if there are detectable PCBs in this soil, and if the detectable PCBs are a potential threat to human health
- **Flammable Materials Storage Room.** It is recommended that the soils and soil vapor adjacent to the drain within the flammable materials storage room (within the Utility Building) be assessed for the possible presence of fuel and associated volatile organic compounds.
- **Incinerator.** It is recommended that the closest exposed soil in the predominantly downwind direction of the incinerator be sampled and analyzed for the presence of heavy metals (Title 22), furans, and dioxins.

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

•FINAL•

18605 Erwin Street
Reseda, California 91335

Assessor's Parcel Number: 2127-012-900

1.0 INTRODUCTION

The Los Angeles Unified School District (LAUSD) retained Eco & Associates, Inc. (Eco) in order to perform a Phase I Environmental Site Assessment (ESA) for the Sherman Oaks Center for Enriched Studies (SOCES) located at 18605 Erwin Street, in the community of Reseda, California (hereafter, the "Site"; see Figure 1). This Phase I ESA was conducted in general accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard No. E1527-13 (hereafter "ASTM E1527-13").

1.1 PURPOSE

The purpose of this Phase I ESA was to identify apparent and potential sources of contamination that, by their association or proximity to the Site, could represent a recognized environmental condition (REC) as defined by ASTM E1527-13. A REC is defined as the presence or likely presence of hazardous substances or petroleum products in, on, or at a property due to any release to the environment, under any conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

1.2 DETAILED SCOPE OF WORK

The scope of work for this project included the following:

- Review of available information to describe the general geology and hydrogeology at the Site
- Review of historical aerial photographs and topographic maps
- Search of regulatory records for possible hazardous material handling, spills, storage, and production at the Site or in the site vicinity

- Reconnaissance of the Site and surrounding area
- Preparation of this report describing the findings and conclusions

1.3 REASON FOR PERFORMING PHASE I

This Phase I ESA, prepared by Eco at the request of LAUSD, was requested for one or more of the following reasons:

- Assistance in the determination of whether any immediate actions at the Site are necessary to comply with existing environmental laws or regulations
- Determination of the presence, or possible presence, of hazardous material releases from past on-site or off-site sources or activities.

2.0 SITE DESCRIPTION

2.1 LOCATION

The Site includes a 21.5 acre school (SOCES) located at 18605 Erwin Street, in the community of Reseda, California (Figures 1 and 2). The Site is bound by Victory Boulevard on its northern side, Erwin Street on its southern side, Yolanda Avenue on its western side, and an alley shared with commercial and residential properties on its eastern side. It is comprised of assessor parcel number (APN) 2127-012-900. A copy of the parcel map that includes the Site is provided in Appendix B.

2.2 DESCRIPTION

At the time of this assessment, the Site was occupied by SOCES. Classroom buildings for this school were located throughout the Site's southern portion. Other buildings within this portion of the Site were being utilized as administrative offices, counseling, nursing, a library, a cafeteria, an auditorium, equipment storage, and a gym. A relatively small transportation office building was also located in the Site's northwestern corner.

The on-site buildings were typically adjoined by concrete-paved sidewalks with arcades. The areas between the buildings and sidewalks were generally paved with asphalt. Well-established trees were located locally throughout these paved areas.

Grass lawns were located along the Site's southern side, in a relatively large sports field in the Site's north-central portion, and in an area adjoining a circular stage at the center of the campus. Paved ball courts occupied relatively large areas within the Site's northeastern and northwestern portions. Asphalt-paved parking lots were located in the Site's northwestern and southeastern portions. For a more detailed description of the Site, refer to Section 4.1 below.

2.3 HISTORY

Based on data collected during this assessment, the Site was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a large field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was constructed in the Site's northwestern corner (existing transportation office). Four single-family dwellings were constructed in the

Site's southern portion during this period. These four southern dwellings were removed in between 1953 and 1954. All of the on-site buildings, with the exception of the portable classrooms and preexisting northwestern building were constructed in 1954. The sidewalks, canopies, pavement between the buildings, and paved ball courts in the Site's northeastern and northwestern portions were also constructed in 1954. The school operated as Sequoia Junior High School between 1954 and 1981. It has been in use as SOCES since 1981. With the exception of modular buildings in the Site's eastern portion, the onsite buildings have been in a similar state since 1954.

3.0 PHYSICAL SETTING

3.1 TOPOGRAPHY

The Site is located between 735 and 740 feet above mean sea level. The Site and vicinity slope very gently to the north-northwest (USGS 2012).

3.2 GEOLOGY

The Site is located within the south-central portion of the San Fernando Valley, which is a relatively level area north of the Santa Monica Mountains. Soils underlying the Site are comprised of Quaternary-age alluvium (river) deposits. These soils are noted to be comprised of mixtures and layers of clay, silt, sand, and gravel (CDWR 1961).

No known active faults pass through the Site (Jennings 1994). The closest known active fault to the Site is the San Fernando Fault, which is located approximately 11 miles northeast of the Site.

3.3 HYDROGEOLOGY

Based on data collected during this assessment, groundwater beneath the Site is located at a depth of approximately 25 feet. This depth is based on measurements made in three wells within the property located immediately east of the Site's northern portion (McDonalds, formerly ExxonMobil station). In October 2008, groundwater was reported in these wells at depths between 25.3 and 25.8 feet (ERI 2008). The groundwater flow direction beneath this property, which is assumed to be similar for the site vicinity, is toward the southeast, contrary to the topographic gradient.

4.0 SITE RECONNAISSANCE

On May 6, 2016, representative of Eco (Quin Kinnebrew) and LAUSD (Eric Longenecker) visited the Site with a in order to assess its current utilization and visually search for indication of surface and subsurface contamination. Photographs taken during the site visit are included in Appendix A. Observations made during the Site reconnaissance are presented below.

4.1 SITE OBSERVATIONS

- At the time of this assessment, the Site was occupied by the Sherman Oaks Center for Enriched Studies. Classroom buildings for this school were located throughout the Site's southern portion (Photo Nos. 1 through 5). These classrooms were generally of wood-frame construction with stucco siding.
- Seven relatively smaller classroom buildings in the Site's eastern portion appeared portable (Photo Nos. 6 and 7).
- In addition to classroom buildings, the school contained buildings in use as administrative offices, counseling, nursing, a library, a student store, a cafeteria (kitchen and dining hall), an auditorium, storage, and a gym (Photo Nos. 8 through 12). These buildings were typically of wood construction and sided with either stucco or wood.
- A relatively small transportation office building is located in the Site's northwestern corner (Photo Nos. 13 and 14). This building, a formal dwelling, is adjoined by landscaped strips and asphalt.
- A utility building in the Site's west-central portion contained a room with two 55-gallon drums of gasoline and one 55-gallon drum of diesel fuel (Photo Nos. 15 and 16). These drums contained hand pumps. In addition to drums, this room contained three 5-gallon fuel containers (all empty), two small electric generators, two leaf blowers, and other small equipment. The floor of this room was covered with white powder from a fire extinguisher. Indications of fuel releases were not apparent within this room. A small floor drain (approximately 1 inch in diameter) was located in the southern portion of this room.
- Laboratory chemicals were being stored and maintained within a locked storage room that adjoined Room 504 in Building K (Photo Nos. 17 and 18). Chemicals were stored within locked metal cabinets within this room. This room also contained shelves and cabinets partially filled with laboratory equipment. Indications of chemical spills were not observed within this room.
- The on-site classroom buildings are generally adjoined by concrete-paved sidewalks with arcades. Covered walkways also traversed between most of the buildings in the Site's southern portion. The areas between the buildings are generally paved with asphalt. Well-established trees are located locally throughout these paved areas.
- A grass lawn is located along the Site's southern side, near the main entrance (Photo Nos. 19 and 20). A relatively large sports field in the Site's north-central portion is also covered with a lawn (Photo Nos. 21 and 22), although this lawn appeared less healthy due to over use and a lack of water. The only other lawn within the Site was the area that adjoined a circle stage in the center of the campus (Photo No. 24).
- Asphalt-paved ball courts occupied relatively large areas within the Site's northeastern and northwestern portions (Photo No. 23).
- Asphalt-paved parking lots are located in the Site's northwestern and southeastern portions (Photo No. 25). Minor oil drips were observed in these areas. Indications of significant motor oil releases were not observed.

- A relatively large outside dining area is located in the Site's southwestern portion, immediately north of the cafeteria (Photo No. 26).
- An incinerator is located between the gym and the Utility Building (Photo Nos. 27 and 28). The incinerator did not appear to have functioned in many years. The concrete adjoining this incinerator was unstained and free of melted materials. Potentially hazardous material releases were not observed within this area.
- Electric transformers were observed throughout the Site (Photo Nos. 29 through 32). These transformers were observed or reported in the following locations.
  - Classroom Building D, exterior east side
  - Classroom Building J, interior north side (per building plans)
  - Classroom Building L, interior west side
  - Classroom Building N, exterior east side
  - Administration Building, exterior north side
  - Library Building, exterior west side
  - Open area east of cafeteria
  - Auditorium, second floor on north side (per building plans)
  - Western Industrial Arts Building, on second floor (per building plans)
- None of the following were observed within or immediately adjacent to the Site:
  - Fill ports or vent pipes to underground storage tanks
  - Aboveground storage tanks, except for the 55-gallon fuel drums in the Utility Building.
  - Below ground hydraulic lifts
  - Groundwater and/or vadose zone wells
  - Pools of potentially hazardous substances
  - Hazardous material storage structures
  - Wastewater discharge pipes
  - Clarifiers, ponds, pits, sumps, or other underground waste disposal areas
  - Unusual or noxious odors

4.2 ADJOINING PROPERTY OBSERVATIONS

- Victory Boulevard, a six lane roadway, is located along the Site's northern side (Photo No. 33). The properties located immediately north of the Site and Victory Boulevard were in residential use (single-family dwellings and a residential apartment; Photo No. 34). Potential contaminant sources and/or releases were not observed within the roadway or visible portions of the residential properties located north of the Site.
- A restaurant (McDonalds) is located east of the Site's northern side and a north-south trending alley along the Site's eastern boundary (Photo No. 35). The remaining adjoining eastern properties contained residential apartments

(Photo No. 36). Potential contaminant sources and/or releases were not observed within the visible portions of the properties located east of the Site.

- Erwin Street, a two lane roadway, is located along the Site's southern side (Photo No. 37). The properties located south of the Site and Erwin Street were occupied by single-family dwellings (Photo No. 38). Potential contaminant sources and/or releases were not observed within the roadway or residential properties located south of the Site.
- Yolanda Avenue, a two lane roadway, is located along the Site's western side (Photo No. 39). The properties located west of the Site and Yolanda Avenue were occupied by single-family dwellings (Photo No. 40). Potential contaminant sources and/or releases were not observed within the roadway or residential properties located west of the Site.

5.0 RECORDS REVIEW

The following subsections present a review of records for the Site and describe information found or provided by these sources. The records reviewed included aerial photographs, topographic maps, street directories, standard environmental federal and state databases, and local agency files.

5.1 AERIAL PHOTOGRAPH REVIEW

The following aerial photographs were reviewed in order to assess land use over time and look for evidence of potentially hazardous material storage, usage, and/or disposal areas. Copies of these photographs, with the exception of the photograph dated 2016, are provided in Appendix B. The 2016 photograph is provided as a background for Figure 2.

TABLE 1

AERIAL PHOTOGRAPH REVIEW SUMMARY

AERIAL PHOTO DATE	OBSERVATIONS
1928	The Site and property located to the east appear in use as an animal pasture. Apparent animals are visible in the Site's north-central portion. A fence appears to border this pasture. Building structures are not visible within the Site. A barn or dwelling is located immediately east of the Site's southern side. Roadways are shown along the Site's northern and southern sides. The properties located north, east, and west of the Site appear either in agricultural use or in a fallow state. The properties located south of the Site are either vacant or in residential use.
1938	The Site appears in agricultural use. It is covered with a relatively light growth of vegetation, similar to that of a hay field. This field extends eastward to Reseda Boulevard. Trees border each side of this field. The properties adjoining the Site remain either in agricultural or residential use. Reseda Park Lake is visible northeast of the Site.

AERIAL PHOTO DATE	OBSERVATIONS
1947	The Site remains covered with a relatively light growth of vegetation. The Site may be fallow. Building structures are not visible within the Site. The properties adjoining the Site remain either in agricultural or residential use.
1952	A building structure is now visible within the Site's northwestern corner, similar to present. Apparent dwellings are now visible in the Site's southwestern and southeastern portions. Two apparent poultry houses are also visible in the Site's southern portion. A roadway is now shown along the Site's western side. A residential development comprised of single-family dwellings is now visible immediately north of the Site's western portion. An agricultural field is visible north of the Site's eastern portion. Most of the land located east of the Site appears in agricultural use. One apparent dwelling is located in this area. The properties located south and west of the Site are either fallow fields or in residential use.
1964	The Site is now in use as a school, similar to present. At least 30 buildings are located within this school. Seven of the buildings in the Site's eastern portion appear portable. With the exception of the portable buildings, the buildings appear similar to that observed within the Site during this assessment. The on-site buildings are adjoined by covered and uncovered walkways. The walkways and buildings appear adjoined by a relatively new asphalt. A parking lot is visible in the Site's northwestern portion, similar to present. A sports field is located in the Site's north-central portion. The areas on each side of this field are paved. The properties located north of the Site are now in residential use. Victory Boulevard has been widened since 1952. The properties located east and west of the Site's northern portion appear in a fallow state. Residential apartment buildings are located east and south of the Site's southeastern portion.
1977	Similar to 1964. Only two portable buildings are now visible in the Site's eastern portion. A parking lot is now visible in the Site's southeastern corner. A fuel service station is now visible immediately east of the Site's northern portion.
1983	Similar to 1977. Two additional portable buildings are visible in the Site's eastern portion. Another residential apartment building is now visible east of the Site.
1989	Similar to 1983. The school appears in a similar state to that observed in the 1983 aerial photograph. Single family dwellings are now visible within the properties located west of the Site's northern portion.
1995	Similar to 1989.
2005	Similar to 1995. Two additional portable buildings (for a total of six) are now visible in the Site's eastern portion. A fuel service station remains visible east of the Site's northern side.
2010	Similar to 2005. The property formerly in use as a fuel station is now vacant.
2016	Similar to 2010. A restaurant, similar to present, is now visible immediately east of the Site's northern portion.

As noted above, indications of potential contaminant sources, such as landfills, large aboveground tanks, oil wells, or pipelines, were not visible within the Site. A fuel service station was located immediately east of the Site's northern side (currently occupied by McDonalds). Due to the flow of groundwater to the southeast, this fuel service station is not considered a contaminant source that could impact the Site. There were no observable potential RECs within the Site or the adjoining properties in the aerial photographs dating between 1928 and 2016.

5.2 TOPOGRAPHIC MAP REVIEW

Topographic maps dating between 1903 and 2012 were reviewed as part of this assessment. These maps are provided in Appendix B of this report. A description of these maps is provided in the table below. As noted on these maps, structures of concern, such as pipelines, oil wells, and landfills are not shown within the Site or immediate site vicinity.

TABLE 2

TOPOGRAPHIC MAP REVIEW SUMMARY

TOPO DATE	OBSERVATIONS
1903	An unpaved roadway is shown traversing roughly east-west through the Site's southern portion. Reseda Boulevard is shown east of the Site, similar to present. No other manmade structures are shown within the Site or the immediate site vicinity. A railroad is shown approximately 0.25 miles south of the Site.
1928	Manmade structures are not shown within the Site. Victory Boulevard and Erwin Street are now shown along the Site's northern and southern sides, respectively. Relatively small building structures are shown scattered throughout the site vicinity.
1944	Two relatively small building structures are now shown in the Site's southeastern portion, adjacent to Erwin Street. They are not, however, visible in the 1938 and 1947 aerial photographs. They are also show immediately east, south, and west of the Site.
1952	Building structures are no longer shown within the Site's southern portion. A building is now shown in the Site's northwestern corner, similar to present. Yolanda Avenue is now shown along the Site's western side.
1967	The Site is now shown in use as a school (Sequoia Junior High School), similar to present. Thirty buildings are now shown within the Site. Relatively small buildings structures remains shown north, south, and west of the Site. Four apartment buildings are now shown east of the Site. The 101 Freeway is shown for the first time approximately 0.7 miles south of the site.
2012	This topo map only shows roadways and elevation contours. Building structures and the use of properties are not shown.

As noted above, there were no potential RECs shown within the Site or the adjoining properties in the topographic maps dating between 1903 and 2012.

5.3 SANBORN® MAP REVIEW

Sanborn® Maps, requested from EDR for this assessment, were not found for the Site or site vicinity.

5.4 ASSESSOR PARCEL MAP

An assessor parcel map and associated property profile were obtained for the Site for review. A copy of the assessor parcel map is included in Appendix B. This map shows the location and dimensions of the parcel that comprises the Site. Easements for chemical and/or petroleum hydrocarbon pipelines are not shown on this map.

The property profile for the Site (APN 2127-012-9008) reports that the owner is the L.A. Unified School District. Owners commonly associated with hazardous material use, such as dry cleaners and fuel service stations, were not listed in the property profile. The use of the on-site parcel is reported as being Federal Property. The Site is reported to be 21.5264 acre in area. Data for the on-site buildings is not shown.

5.5 CITY DIRECTORIES

A search of city directories including city, cross reference, and telephone directories at approximately five-year intervals for the years spanning 1920 through 2013 was obtained from EDR®. The listed Site occupants for this time period are provided on the following table.

TABLE 3

SUMMARY OF CITY DIRECTORIES

PROPERTY ADDRESS	LISTED SITE OCCUPANT	YEAR
18605 Erwin Street Reseda, CA	Sequoia Junior High School	1956
	Sequoia Junior High School	1962
	Sequoia Junior High School	1970
	Sequoia Junior High School Junior Achievement Sequoia Center	1975
	Sequoia Junior High School	1980
	Sherman Oaks Center for Enriched Studies	1985
	Sherman Oaks Center for Enriched Studies	1991
	Sherman Oaks Center for Enriched Studies	1995
	Sherman Oaks Center for Enriched Studies	2004
	Sherman Oaks Center for Enriched Studies	2008
	Sherman Oaks Center for Enriched Studies	2013

As noted on the table above, the Site has been occupied by a school since at least 1956. Occupants that typically use, store, or generate potentially hazardous materials were not listed at the Site's address.

5.6 ENVIRONMENTAL DATABASE REVIEW

Eco conducted a review of regulatory information prepared by Environmental Data Resources, Inc. (EDR®). The search radii equaled or exceeded the criteria specified in ASTM E1527-13. A regulatory records search of this nature is based on information published by state and federal regulatory agencies and is used to evaluate whether the subject Site or near-vicinity properties are listed as having a past or present record of actual or potential environmental impact. Please note that regulatory listings include only those facilities that are known by the regulatory agencies at the time of publication. The EDR report, dated April 13, 2016, is presented in Appendix C. The complete regulatory lists that were searched as part of this review are provided on pages 3 through 13 of the EDR Executive Summary. A description of these databases is provided at the end of the EDR report.

A map provided in the EDR report shows the location of the subject Site and properties within the search distances defined by ASTM (see Page 2 in Appendix C). As noted in the EDR report, the Site is listed in four of the environmental databases searched. In 2008, it was listed in the RCRA-LQG database as a result of being a handler or generator of potentially hazardous materials. The type of materials being generated or handled was specified as being lead. This is suspected of being the result of removing lead-based paint.

The Site was listed in the HAZNET database as a result of removing potentially hazardous materials from the Site. These materials were reported as follows:

TABLE 4

HAZARDOUS MATERIALS TRANSPORTED FROM SITE

DISPOSAL DATE	VOLUME DISPOSED (TONS)	MATERIAL DISPOSED
1997	0.8428	Asbestos containing waste
1997	0.8340	Unspecified aqueous solution
1997	0.1042	Photochemicals/photoprocessing waste
1999	0.045	Other organic solids
2001	0.07	Other inorganic solid waste
2001	0.15	Other inorganic solid waste
2002	0.2	Other organic solids
2008	64.8	Asbestos containing waste
2008	4	Asbestos containing waste

DISPOSAL DATE	VOLUME DISPOSED (TONS)	MATERIAL DISPOSED
2009	0.0175	Laboratory waste chemicals
2009	19.2	Asbestos containing waste
2009	0.225	Laboratory waste chemicals
2010	0.1	Other organic solids
2010	0.2	Laboratory waste chemicals
2010	0.85	Unspecified organic liquid mixture
2012	0.1425	Not specified
2013	0.4	Not specified

The Site is listed in the FINDS & ECHO database as a result of generating, transporting, treating, storing, or disposing of potentially hazardous materials. These materials are listed on the table above.

There are 13 properties listed within 1 mile of the Site that have, or have had, the potential to release hazardous materials into the subsurface soil and/or groundwater. Three of these properties are located immediately adjacent to the Site or up-gradient (northwest) and within 1/4 mile of the Site. Hazardous materials released at such properties would, due to their location, have the greatest potential to impact the soil and/or groundwater underlying the Site. Impacted groundwater beneath off-site properties could migrate into or toward the subject Site. A description of these properties is listed in the following table.

TABLE 5

EDR® SUMMARY OF PROPERTIES LOCATED UPGRADIENT AND WITHIN ¼ MILE OF THE SITE

EDR® ID NO.	PROPERTY/ BUSINESS NAME & ADDRESS	ENVIRONMENTAL DATABASE LISTS	COMMENTS
5	Far East Body 18564 Erwin Street Reseda, CA	EDR Hist Auto	This adjoining property south of the school was listed in 1999 as a result of being an historical auto station. Potentially hazardous material releases were not reported at this property.

EDR® ID NO.	PROPERTY/ BUSINESS NAME & ADDRESS	ENVIRONMENTAL DATABASE LISTS	COMMENTS
B7 **B8** **B9** **B10** **B11**	Guigo USA / Mobil 18-KMM 12567 18510 Victory Blvd. Reseda, CA	LUST, HIST UST, CHMIRS, SWEEPS UST, CA FID UST, UST, RCRA-LQG	This property is listed in the LUST database as having spilled gasoline from leaking underground storage tanks. The released gasoline impacted the underlying soil and groundwater. This case was closed in 2009 (see Section 5.7.3), indicating that the impacts to soil and groundwater soil were not significant or were cleaned to the satisfaction of the regulatory agency. This property is also listed in the HIST UST, SWEEPS UST, CA FID UST, and UST databases as a result of having had four underground tanks installed in 1969. This property was reported in the CHMIRS database as a result of a small release of gasoline in 2002. This station was listed in the RCRA-LQG in 2002 and 2007 due to being a large quality generator of hazardous waste, such as soil. The waste is noted to be an ignitable material that
12	Victory Cleaners 18515 Victory Blvd. Reseda, CA	RCRA-SQG, FINDS. WIP, ECHO	This property, located immediately northeast of the Site, was listed as a small quantity generator of potentially hazardous waste in 1991. The type of waste is not listed, although suspected of being tetrachloroethene (a common dry cleaning solvent). The property was listed in the WIP database as a result of being a part of the well investigation program, which investigated selected businesses to assess the possible presence of hazardous material releases beneath their properties. This property was reported in the ECHO database as having no regulatory violations. Hazardous material releases were not reported at this property. A dry cleaning facility is no longer located at this address.

Note: Table information source: EDR. These properties and a description of the acronyms above are identified on Pages 3 through 13 of the Executive Summary of the EDR Report (Appendix C).

Based on a review of the properties in the EDR database report, there is relatively low potential that contaminants released from the properties listed above have impacted the soil and/or groundwater underlying the Site. Potential contaminants were released into the soil and/or groundwater beneath four of these properties. Each of these releases, however, has been cleaned to the satisfaction of the regulating agencies.

5.7 LOCAL AGENCY FILES

Environmental records pertaining to on-site or near-vicinity hazardous material sources and/or releases were obtained from the following sources. A summary of these records is provided below

- Los Angeles Unified School District
- Los Angeles County Department of Public Works
- Regional Water Quality Control Board

- Department of Toxic Substances Control
- South Coast Air Quality Management District
- California Division of Oil, Gas, and Geothermal Resources

5.7.1 LOS ANGELES UNIFIED SCHOOL DISTRICT

The LAUSD provided a copy of the building plans prepared for the Site in 1953. These plans, which were comprised of 259 sheets, were reviewed by Eco in order to located potential contaminant sources. These plans are not appended to this report due to their physical size and electronic size (about 200 megabytes of electronic memory). These building plans included index sheets, grading plans, foundation plans, framing details, roof plans, detailed building specifications, electrical plans, plumbing and heating plans, sidewalk details, and sprinkler plans for all landscaped areas (which are similar to present).

Potentially hazardous material sources observed within these plans, which are shown on Figure 2, included the following:

- The transformers listed in Section 4.1
- A hazardous materials storage room & adjoining finishing room in the southwestern corner of the Industrial Arts Building No. 1.
- Two flammable materials storage rooms on the eastern side of the Utility Building.

Underground fuel storage tanks (including heating oil) were not indicated in any of the building plans provided.

A representative of LAUSD, Mr. Eric Longenecker, noted that it was formerly common practice to apply an arsenic-based herbicide to soil prior to paving with asphalt. It is not known if the onsite soils were treated in this manner during its initial development.

5.7.2 LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS

Records for the Site were requested from the Los Angeles County Department of Public Works (LACDPW). The LACDPW maintains records pertaining to underground storage tanks, industrial waste, stormwater, and hazardous material releases. A LACDPW representative noted that they had no records for the Site. A search of their database at http://ladpw.org/epd/CleanLA/OpenFileReview.aspx also reported no records for the Site (Appendix D).

5.7.3 REGIONAL WATER QUALITY CONTROL BOARD

Records from the Regional Water Quality Control Board (RWQCB) were searched via their online search program at http://geotracker.swrcb.ca.gov. The properties listed in their database are known to have released potentially hazardous materials into the underlying soil and/or groundwater. The Site was not listed within the RWQCB files (Appendix D).

A search of the RWQCB files revealed one property within the site vicinity (immediately adjacent to the Site or within 1/4 mile and potentially upgradient (northwest)) currently or formerly regulated by the RWQCB as a result of hazardous material releases. This property, formerly occupied by an ExxonMobil fuel station, is located east of the Site's northern side (currently a McDonald's restaurant). This case was opened in 2002 as a result of a gasoline spill to the underlying soil and groundwater. This case was closed in 2009, indicating that the soil and groundwater were cleaned to the satisfaction of the RWQCB. A groundwater monitoring report for this property in 2008 (ERI 2008) noted that the depth to groundwater beneath that facility was between 25 and 26 feet, with a flow direction to the southeast. The contaminants of concern, benzene and methyl tertiary butyl ether (MTBE) were both reported during the last monitoring report with concentrations of less than 1 part per billion. The release area, the former tanks, is located approximately 40 feet east of the Site. The maximum contaminant concentrations in soil within this area were reported to be below respective California Regional Water Quality Control Board – Los Angeles Region Maximum Soil Screening Levels. Due to the relatively low soil contaminant concentrations, the reported groundwater contaminant concentrations, and the groundwater flow direction (away from the Site), the fuel-related contaminants released at this property are not considered a potential threat to the soil and/or groundwater underlying the Site.

5.7.4 DEPARTMENT OF TOXIC SUBSTANCES CONTROL

The Department of Toxic Substances Control (DTSC) records were searched using their map interface program at http://www.envirostor.dtsc.ca.gov/public. A search of this database revealed no DTSC-regulated properties (properties that use and/or have released contaminants) within 1/4 mile and upgradient of the Site (Appendix D).

5.7.5 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Records from the SCAQMD were searched via their on-line search program at http://www.aqmd.gov. A copy of the records for the Site is provided in Appendix D. The school is noted as having obtained two permits in 1990 and two permits in 1995 to utilize gas-powered boilers. The two permits obtained in 1990 are currently inactive. Two additional permits were obtained in 2001 to operate gas powered boilers.

The school obtained a permit in 1967 to operate a spray booth for paint and solvents As noted on the permit in Appendix D, this spray booth was 6-feet wide, 7-feet high, and 6.5-feet deep. The location of this spray booth was not specified in the permit, but it is suspected of being utilized within the western industrial arts building.

5.7.6 CALIFORNIA DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

Oil well maps provided by the California Division of Oil, Gas, and Geothermal Resources (CDOGGR) were searched via their search program at http://maps.conservation.ca.gov/doms/index.html. Based on a review of the maps provided by CDOGGR (see Appendix D), there are no oil wells located within the Site. The closest oil well, referred to as "San-Val Oil Co. LTD 1", is shown approximately 1.8 miles south-southeast (across gradient). This well is noted as being a plugged and abandoned well. Due to its location and distance, potential contaminant releases from this well are not considered a potential threat to the soil and/or groundwater underlying the Site.

6.0 USER PROVIDED INFORMATION

Information provided by the LAUSD is summarized in Section 5.7.1. There was no other user-provided information for the Site.

6.1 SPECIALIZED INFORMATION

No specialized knowledge of RECs or other environmental conditions (OECs) associated with the Site was reported to Eco by the LAUSD or other Site representatives.

6.2 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Eco was not provided with any commonly known knowledge or reasonably ascertainable information about the Site that would constitute a REC.

6.3 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Eco made no observations during this assessment that would suggest value reduction of the Site for environmental issues.

7.0 PHASE I ESA FINDINGS AND CONCLUSIONS

7.1 SITE BACKGROUND

Based on data collected during this assessment, the Site was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a large field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was constructed in the Site's northwestern corner (existing transportation office). Four single-family dwellings were constructed in the Site's southern portion during this period. These four southern dwellings were removed in between 1953 and 1954. All of the on-site buildings, with the exception of the portable classrooms and preexisting northwestern building were constructed in 1954. The sidewalks, canopies, pavement between the buildings, and paved ball courts in the Site's northeastern and northwestern portions were also constructed in 1954. The school operated as Sequoia Junior High School between 1954 and 1981. It has been in use as SOCES since 1981. With the exception of modular buildings in the Site's eastern portion, the onsite buildings have been in a similar state since 1954.

7.2 RECOGNIZED ENVIRONMENTAL CONDITIONS

Recognized environmental conditions were not identified within the Site during this assessment. Historical RECs were also not identified at the Site. Historical RECs refer to a past release that has been remediated to below "residential" standards and given regulatory closure with no use restrictions.

Other Environmental Conditions (OECs) were identified within the Site during this assessment. OECs or potential RECs are features or issues that, while being judged to have a relatively low probability of resulting in significant impact to the Site, should be considered in project planning and risk management. The OECs listed below were identified at the Site.

- **Lead-based Paint.** With the exception of five of the newer (installed after 1977) portable buildings on the site's eastern side, it is considered likely that the paint on the buildings contains or formerly contained elevated lead concentrations. Due to its slow deterioration with time, the paint typically flakes off and accumulates in the adjoining soils. This can result in elevated lead concentrations in the soil adjoining older buildings. Note that the on-site buildings have been mostly adjoined by pavement since 1954. As such, the potential that the soils underlying this pavement have been impacted with lead is considered relatively low. Relatively high lead concentrations, however, are anticipated in the planters that contain trees between the buildings, or any other unpaved areas adjoining the buildings.

  Although the former on-site dwellings were less than 7 years of age, there is a potential that leaded paint dust and fragments were generated during their demolition in approximately 1954. These former dwellings were located adjacent to the auditorium and Classroom Buildings D, E, and H.

- **Pesticides.** As noted above, the Site was in periodic agricultural use (fields) in the 1930s and 1940s. As such, it is considered possible that persistent pesticides were formerly used within the Site, and may have impacted the surficial soils. Due to the lack of orchards and row crops, which are relatively heavy users of pesticides, elevated pesticide concentrations (greater than regulatory levels) are not anticipated at the Site.

- **Arsenic-Based Herbicide.** It was formerly common practice for the LAUSD to apply an arsenic-based herbicide to soil immediately prior to paving with asphalt. As such, there is a potential that elevated arsenic concentrations (greater than background levels) are present in the soils immediately underlying the paved portions of the site.

- **Transformers.** Nine electric transformers were documented at the Site. Due to the age of most of these transformers, it is considered possible that they contain polychlorinated biphenyls (PCBs). Electric transformers were observed within the Site at six locations. Three additional transformers were reported in three rooms not entered during this assessment. The locations of these transformers are as follows.

  - Classroom Building D, exterior east side
  - Classroom Building J, interior north side (per building plans)
  - Classroom Building L, interior west side
  - Classroom Building N, exterior east side (relatively new transformer)
  - Administration Building, exterior north side
  - Library Building, exterior west side
  - Open area east of cafeteria
  - Auditorium, second floor on north side (per building plans)
  - Western Industrial Arts Building, on second floor (per building plans)

  Transformer oil releases were not observed beneath or adjacent to any of the transformers reviewed at the time of this assessment. Only two of the transformers were located adjacent to exposed soil (west side of library and in open area east of cafeteria). The remaining transformers were located on concrete foundations that adjoined paved areas, or located within the second floor of a building.

- **Flammable Materials Storage Room.** Two 55-gallon drums of gasoline and one 55-gallon drum of diesel were observed in a flammable materials storage room on the eastern side of the Utility Building. Three additional 5-gallon fuel containers (all empty) were also observed in this room. Indications of releases from these fuel containers were not evident at the time of this assessment. A drain hole located in the southern portion of this room would have drained the fuel from the floor of this room to the underlying soil (based on down-hole observation) in the event of a significant release.
- **Incinerator.** A trash incinerator is located immediately east of the Utility Building. This incinerator is located within a walled compound that was surfaced with concrete. Indications of staining, melted materials, or other potentially hazardous material releases were not observed around the incinerator area. The incinerator in this compound did not appear to have been utilized significantly after it was installed in 1954.
- **Spray Booth.** A permit to operate a paint and/or solvent spray booth was granted at the Site in 1968. The location of this booth was not ascertained at the time of this assessment. It is suspected of being utilized in the western Industrial Arts Building, where the original building plans show such as structure. The improper use of such structures can result in the spillage of solvents, which can seep through concrete foundations and into the underlying soils. Due to the limited use of this structure (not utilized to the extent that commercial paint booths are used), the potential that solvents have impacted the underlying soils is relatively low.

7.3 REGIONAL HAZARDOUS MATERIAL RELEASES

Based on a review of properties within the site vicinity and data made available during this assessment, there is a relatively low potential that contaminants from upgradient properties have impacted the soil and/or groundwater underlying the Site.

7.4 PRELIMINARY ENVIRONMENTAL SCREENING

The data collected during the preparation of this Phase I ESA was used to complete a preliminary environmental screening of the Site. This screening is required for new school sites or school’s undergoing expansion, major repair, or modernization. It is our understanding that some of the buildings within the Site’s eastern and western portions will be either removed and/or replaced. This screening assesses the potential for increased environmental hazards to students and staff as a result of the planned modification. These hazards include those associated with power lines, railroads, traffic noise, faults, floods, and landslides.

A Preliminary Environmental Screening Checklist is included as Appendix E of this report. As noted on this checklist, the planned school modernization will not create any new significant safety hazards or exacerbate any existing safety hazards to the school's students or staff.

8.0 PHASE I ESA RECOMMENDATIONS

The following recommendations are based on the findings and conclusions presented above.

- **Lead-Based Paint.** Prior to disturbing soil in planned construction areas, it is recommended that representative soil samples be collected within these areas and analyzed for lead. The results of this investigation should be used to determine if the lead concentrations in soil in these areas are a potential threat to human health.
- **Arsenic.** Prior to disturbing asphalt in planned construction areas, it is recommended that representative soil samples be collected beneath the asphalt within these areas and analyzed for arsenic. The results of this investigation should be used to determine if the arsenic concentrations in soil in these areas are a potential threat to human health
- **Pesticides.** In order to confirm the absence of pesticides within planned construction areas, it is recommended that representative soil samples be collected within these areas and analyzed for chlorinated pesticides.
- **Transformers.** If future construction activities encroach into the immediate vicinity of pad-mounted transformers, it is recommended that the adjoining soils be assessed for the possible presence of PCBs prior to disturbing the soil around the transformer. The results of this investigation should be used to determine if there are detectable PCBs in this soil, and if the detectable PCBs are a potential threat to human health
- **Flammable Materials Storage Room.** It is recommended that the soils and soil vapor adjacent to the drain within the flammable materials storage room (within the Utility Building) be assessed for the possible presence of fuel and associated volatile organic compounds.
- **Incinerator.** It is recommended that the closest exposed soil in the predominantly downwind direction of the incinerator be sampled and analyzed for the presence of heavy metals (Title 22), furans, and dioxins.

9.0 LIMITATIONS

9.1 SIGNIFICANT ASSUMPTIONS

The ASTM E1527-13 standard ensures that the assessment methods used constitute appropriate inquiry consistent with good commercial and customary practice. It includes the review of prior uses of the property to identify and analyze environmental conditions that constitute past or potential environmental risks associated with the property. Assessments conducted in accordance with this standard are intended to reduce, but not eliminate uncertainty, with respect to the potential for RECs associated with the property.

9.2 LIMITATIONS AND EXCEPTIONS

The findings and opinions presented in this document pertain to site conditions at the time of this assessment. They should not be relied upon to represent conditions at substantially later dates. The opinions included are based on information obtained during the study and on the experience of professional personnel. If additional information becomes available that might impact environmental findings, then the opportunity to review the information, re-assess the potential concerns, and modify Eco's opinions (if warranted) will be requested.

Although this investigation has been an attempt to identify the potential for environmental impacts to the Site, potential sources of contamination may have escaped detection due to one or more of the following:

- Limited scope of this assessment
- Inaccuracy of public records
- Presence of undetected or unreported environmental incidents

It was not within the scope of this assessment to address non-ASTM issues such as radon, lead-based paint, asbestos-containing materials, naturally occurring hazardous materials, or vegetation and wetlands. Further, it was not the purpose of this assessment to determine the actual presence, degree, or extent of contamination at the Site.

9.3 SIGNIFICANT DATA GAPS

Significant data gaps were not identified during the preparation of this Phase I ESA. Data gaps to the standard for this report include the following:

- Interviews with adjoining property representatives
- Review of the Site's chain of title report
- A search of environmental liens
- Assessment of the Site's purchase price and the fair market value

9.4 ADDITIONAL SERVICES

No additional services were included with the Phase I portion of this ESA.

9.5 SPECIAL TERMS AND CONDITIONS

No special terms or conditions apply to the preparation of this report.

9.6 USER RELIANCE

The findings and conclusions presented in this report represent the best professional judgment of the Environmental Professional based on the conditions that existed during the assessment and the information available during the course of the assessment. Information regarding operations, conditions, and test data provided by the client, owner, or other representative has been assumed to be correct and complete.

This report may be distributed and relied upon by LAUSD, its successors, and assignees. Reliance on the information and conclusions presented in this report by any other party is not authorized without the written consent of Eco & Associates, Inc.

10.0 ENVIRONMENTAL PROFESSIONAL QUALIFICATIONS AND SIGNATURE

This Phase I Environmental Site Assessment Report was prepared by Mr. Quin Kinnebrew, an Environmental Professional who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of hazardous material releases or threatened releases on, at, in, or to a property. He is sufficiently qualified to meet the objectives and performance of this assessment. Mr. Kinnebrew holds a current Professional Geologist's license (PG# 5696) in California and has more than 24 years of full-time relevant experience. He obtained his Master's degree from an accredited institution (Texas A&M University) in the discipline of engineering geology. Mr. Kinnebrew has continued to build on his environmental-related knowledge through participation in continuing education and work-related experience.

As required by 40 Code of Federal Regulations (CFR) 312.21(d) and Section 12.2 of the ASTM E1527-13, the environmental professional's statement and signature are provided below.

In support of the contents of this report:

> *I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312;*

and

> *I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all-appropriate inquiries in conformance to the standards and practices set forth in 40 CFR Part 312.*

Quin Kinnebrew

Quin Kinnebrew, PG, #5696
Project Geologist

11.0 REFERENCES

California Department of Water Resources (CDWR), 1961. Bulletin No. 104 – "Planned Utilization of the Groundwater Basins of the Coastal Plains of Los Angeles County"; dated June 1961.

Environmental Resolutions, Inc. (ERI), 2008. *Fourth Quarter 2008 Groundwater Montiroing and Status Report*, Former ExxonMobil Station 18KMM, 18510 Victory Boulevard, Reseda, California; dated December 29, 2008.

Jennings, C.W., 1994. "Fault Activity Map of California and Adjacent Areas with Locations and Ages of Recent Volcanic Eruptions", Division of Mines and Geology.

United States Geological Survey (USGS), 2012. Canoga Park, California Minute Quadrangle, Scale 1" = 2,000'.

________, 1967. Canoga Park, California Minute Quadrangle, Scale 1" = 2,000'.

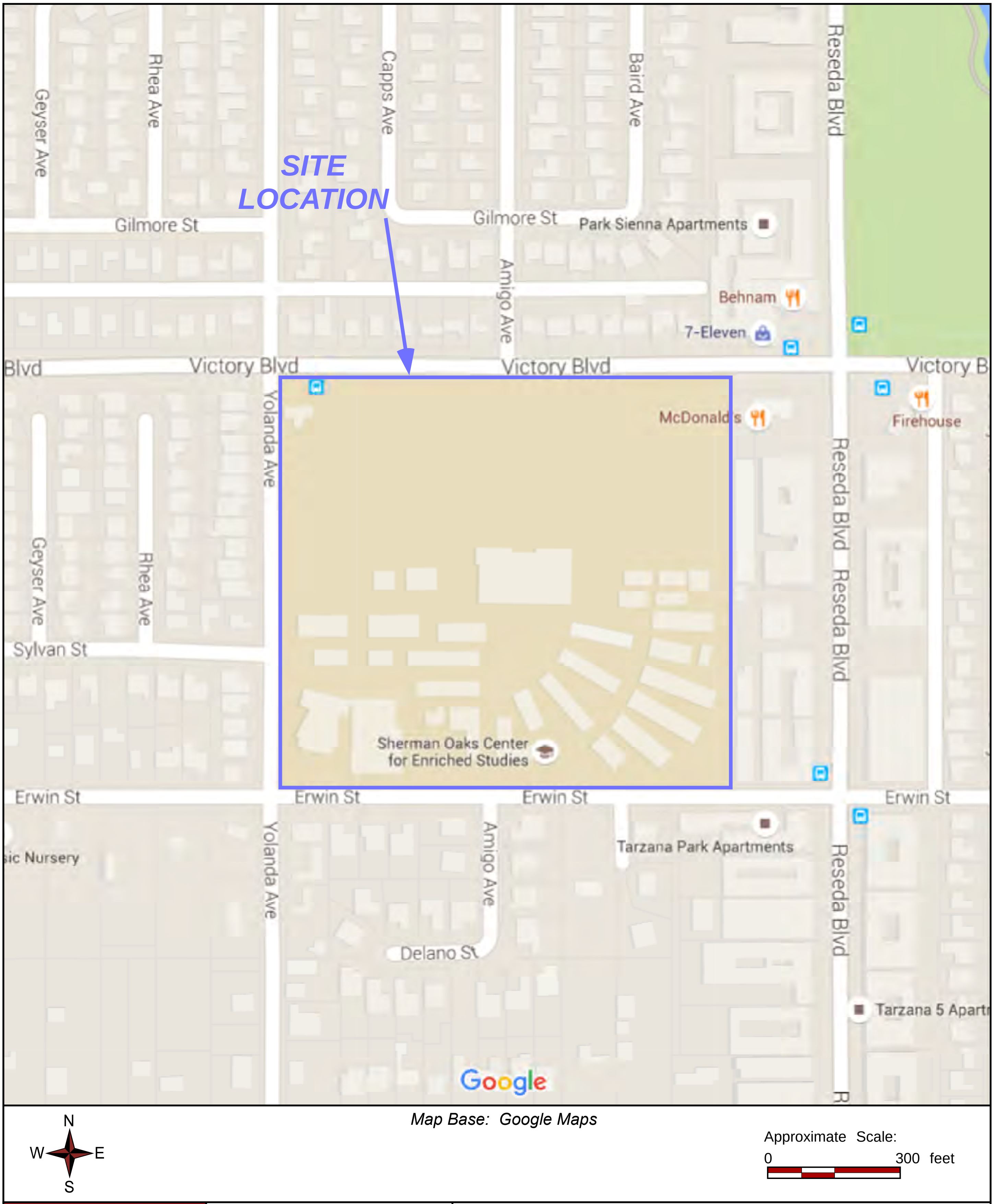
________, 1952. Canoga Park, California Minute Quadrangle, Scale 1" = 2,000'.

________, 1944. Calabasas, California Minute Quadrangle, Scale 1" = 5,208'.

________, 1928. Reseda, California Minute Quadrangle, Scale 1" = 2,000'.

________, 1903. Calabasas, California Minute Quadrangle, Scale 1" = 5,208'.

FIGURES



Map Base: Google Maps

Environmental Excellence

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SITE LOCATION MAP

18605 Erwin Street
Reseda, California

PROJECT NO. Eco-16-711	DATED July 2016	FIGURE **1**

Base photograph from Google Earth (dated February 8, 2016)

Approximate Scale:

0 180 feet

LEGEND:

■ Electrical Transformer

N
W E
S

Environmental Excellence

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SITE PLAN

18605 Erwin Street
Reseda, California

PROJECT NO. Eco-16-711	DATED July 2016	FIGURE 2

APPENDIX A

SITE RECONNAISSANCE PHOTOGRAPHS

SITE RECONNAISSANCE PHOTOGRAPHS

Photo No. 1. North view between library and counseling buildings.

Photo No. 2. Northwest view of Building G.

Photo No. 3. Southeast view between Buildings J & K.

Photo No. 4. Northwest view between Buildings L & M.

Photo No. 5. West view adjacent to Industrial Arts Building.

Photo No. 6. East view of portable buildings in northeast corner of campus.

Photo No. 7. East view of portable buildings in northeast corner of campus.

Photo No. 8. Northwest view of auditorium.

Photo No. 9. South view of "Camelot" building.

Photo No. 10. Southwest view of Lath House.

Photo No. 11. West view of gym.

Photo No. 12. North view of tool shed and storage shed.

Photo No. 13. Southeast view of Transportation Office.

Photo No. 14. South view of Transportation Office.

Photo No. 15. West view of fuel drums within Plant Manager building.

Photo No. 16. North view of equipment room within Plant Manager building.

Photo No. 17. Northeast view within chemical storage room.

Photo No. 18. Southwest view within chemical storage room.

Photo No. 19. Northwest view of front lawn.

Photo No. 20. Northeast view of front lawn.

Photo No. 21. Northwest view of sports field.

Photo No. 22. Northeast view of sports field.

Photo No. 23. Southeast view of paved court yard.

Photo No. 24. Southwest view of the Center Circle Stage.

Photo No. 25. South view of southeastern parking lot.

Photo No. 26. Northwest view of covered lunch area.

Photo No. 27. North view of incinerator.

Photo No. 28. East view of incinerator.

Photo No. 29. West view of transformer adjoining Building N.

Photo No. 30. Southwest view of transformer on site's southern side.

Photo No. 31. Northwest view of transformer adjoining Building D.

Photo No. 32. North view of transformer within Building L.

Photo No. 33. East view of roadway (Victory Blvd.) north of site.

Photo No. 34. Northeast view of dwellings located north of site.

Photo No. 35. Northwest view of restaurant east of site.

Photo No. 36. Northeast view of apartment building east of site.

Photo No. 37. East view of roadway (Erwin St.) south of site.

Photo No. 38. Southeast view of dwellings located south of site.

Photo No. 39. South view of roadway (Yolanda Ave.) located west of site.

Photo No. 40. West view of dwellings located west of site.

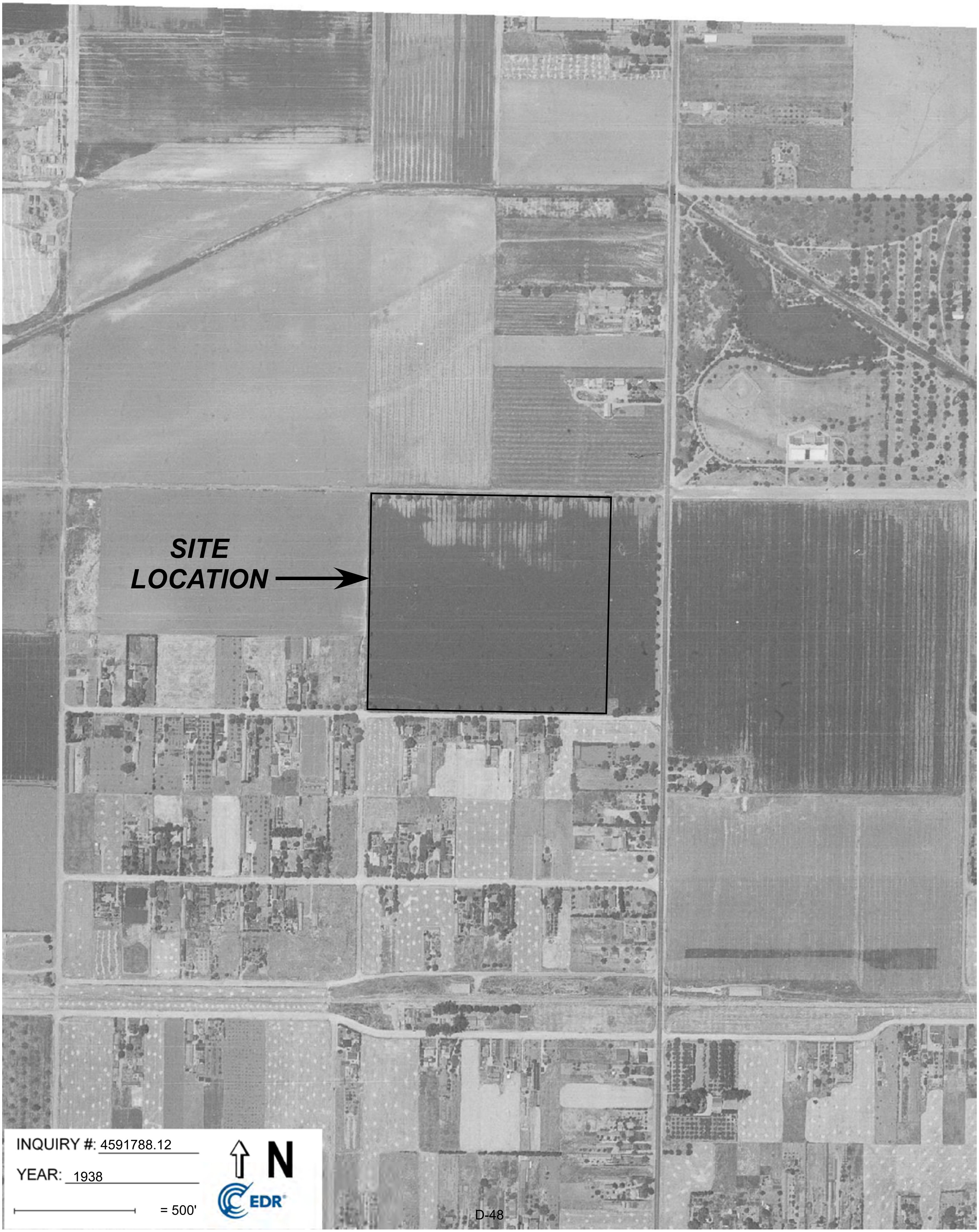
APPENDIX B

AERIAL PHOTOGRAPHS, TOPOGRAPHIC MAPS, AND ASSESSOR'S PARCEL MAP

INQUIRY #: 4591788.12

YEAR: 1928

= 500'



INQUIRY #: 4591788.12

YEAR: 1938

= 500'

INQUIRY #: 4591788.12

YEAR: 1947

= 500'

N

EDR


SITE
LOCATION
INQUIRY #: 4591788.12
YEAR: 1952
= 500'
N
EDR

INQUIRY #: 4591788.12

YEAR: 1964

= 500'

INQUIRY #: 4591788.12

YEAR: 1977

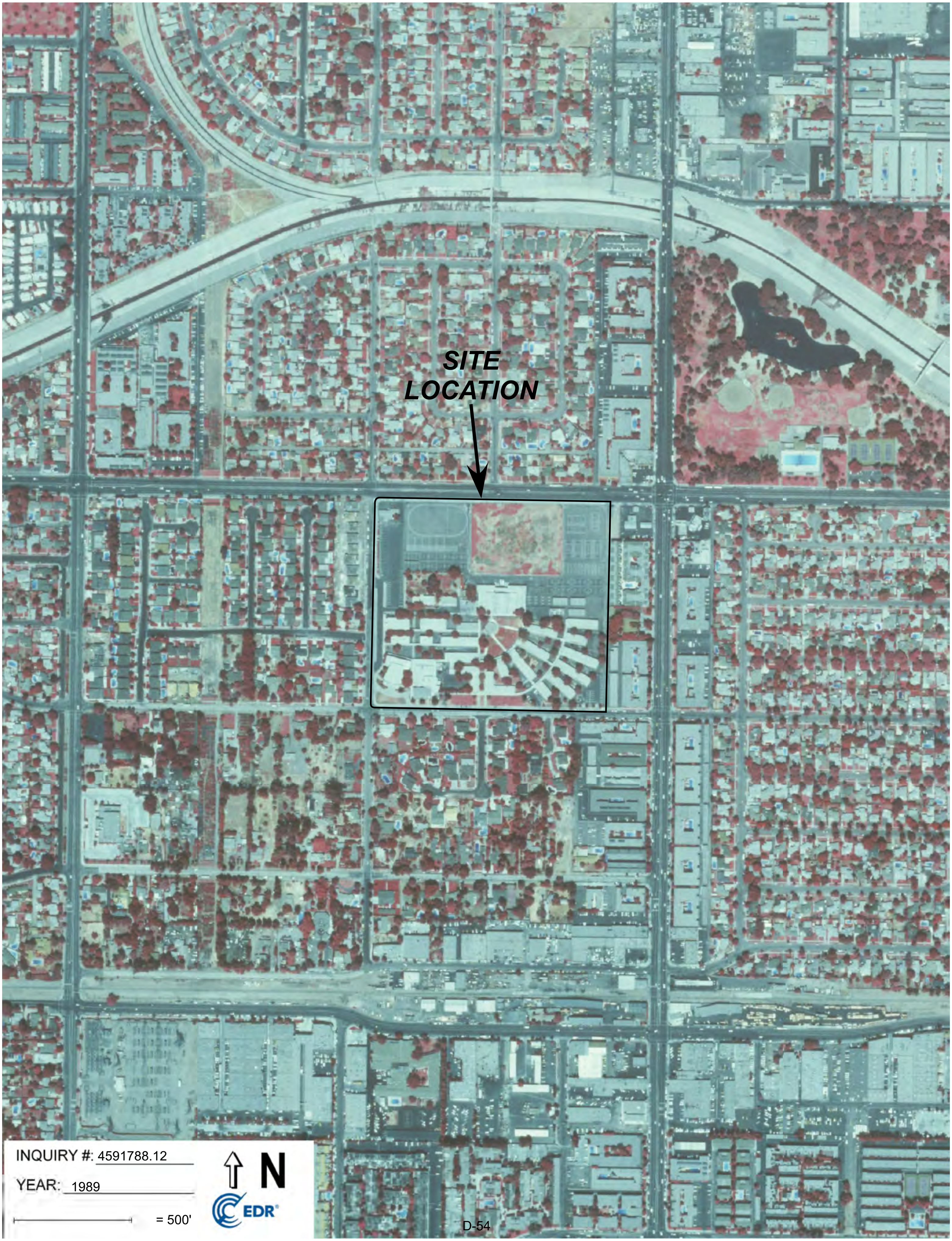
= 500'

N

INQUIRY #: 4591788.12

YEAR: 1983

= 500'



INQUIRY #: 4591788.12

YEAR: 1989

INQUIRY #: 4591788.12

YEAR: 1995

INQUIRY #: 4591788.12

YEAR: 2005

= 500'

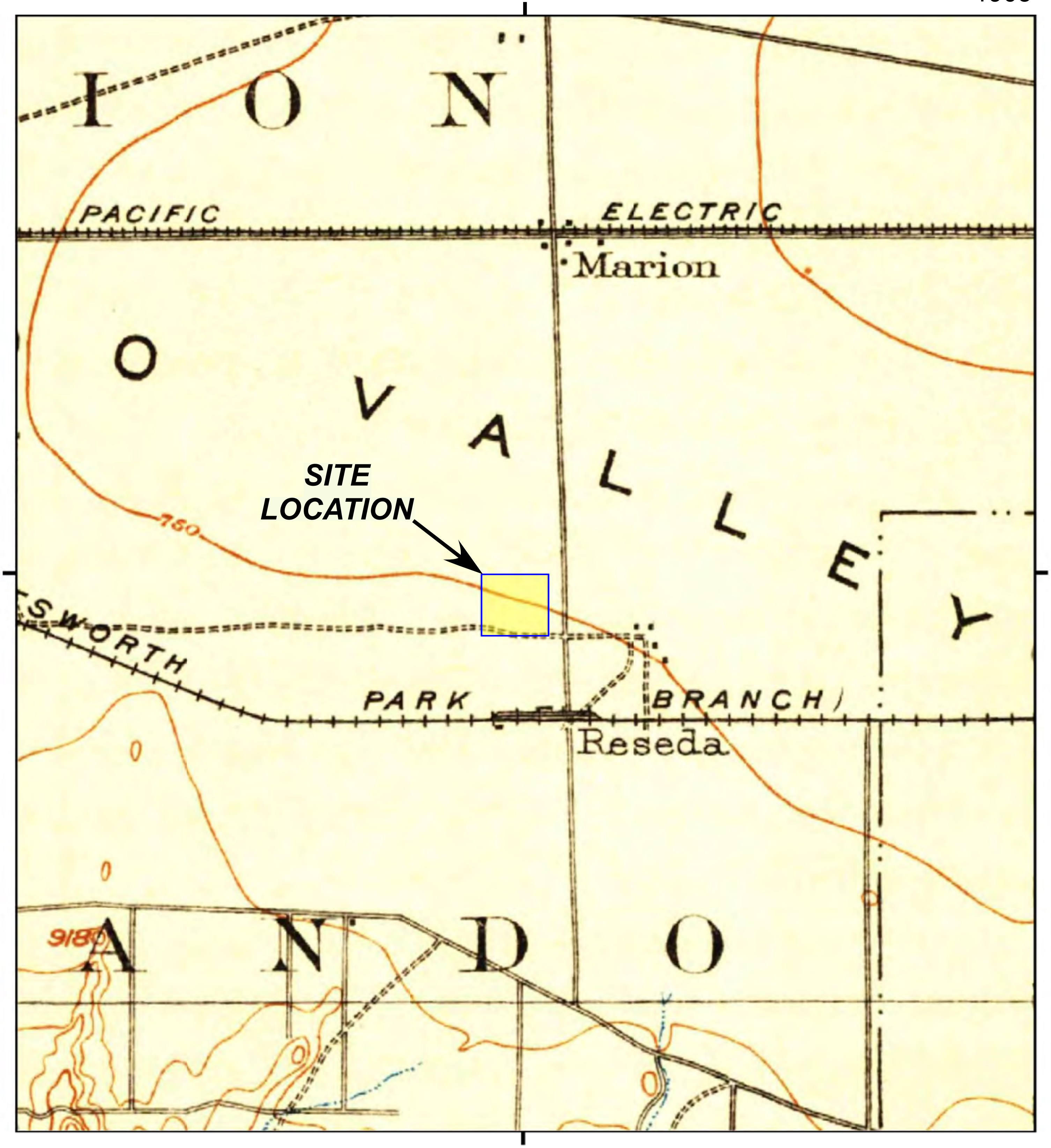
INQUIRY #: 4591788.12

YEAR: 2010

= 500'

Historical Topo Map

1903



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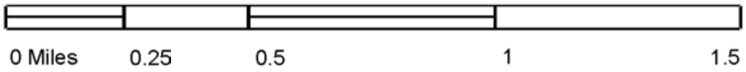
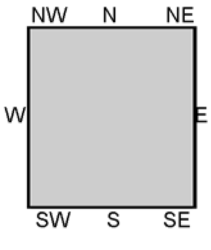


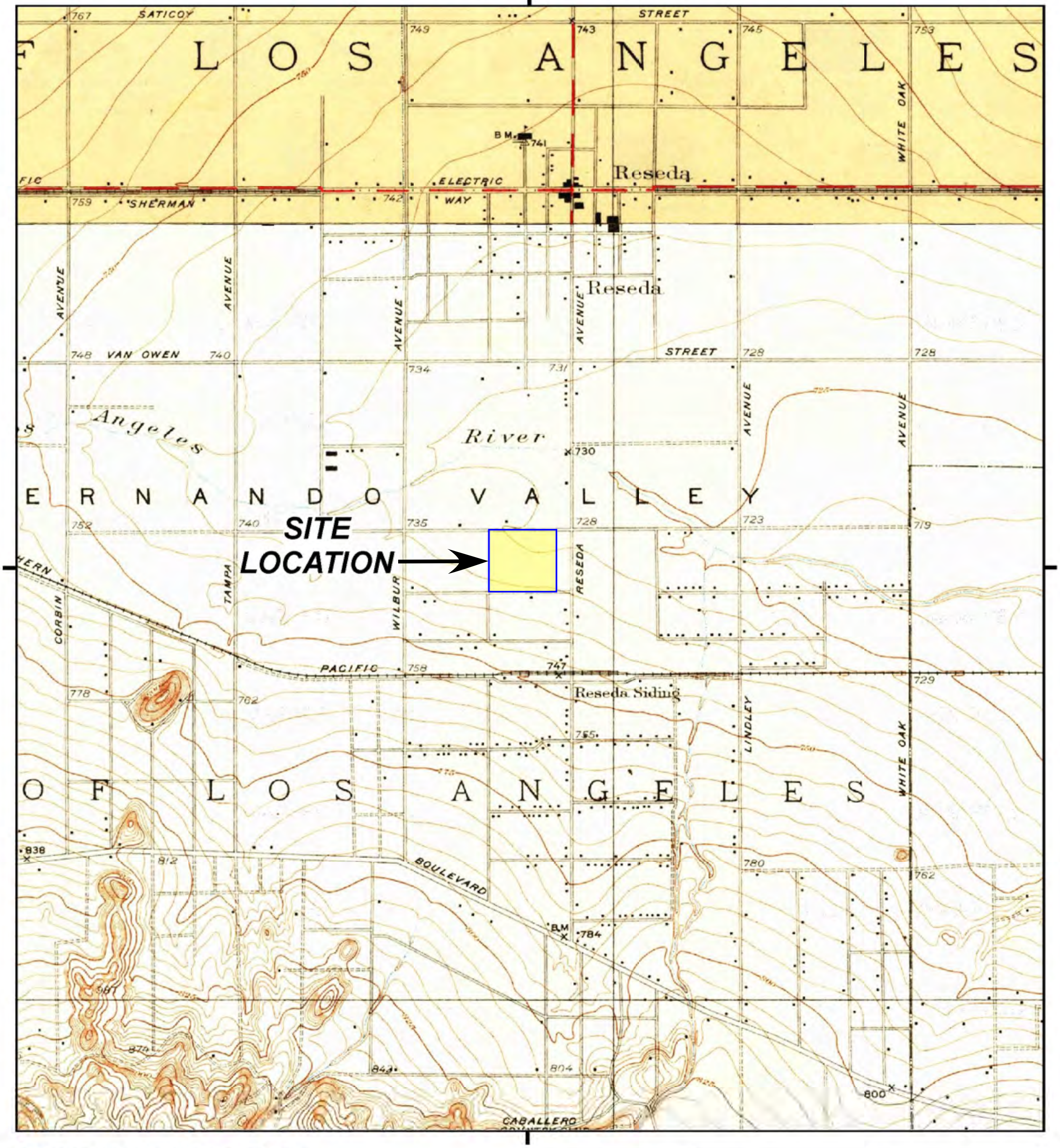


TP, Calabasas, 1903, 15-minute

SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

Historical Topo Map

1928



0 Miles 0.25 0.5 1 1.5

This report includes information from the following map sheet(s).

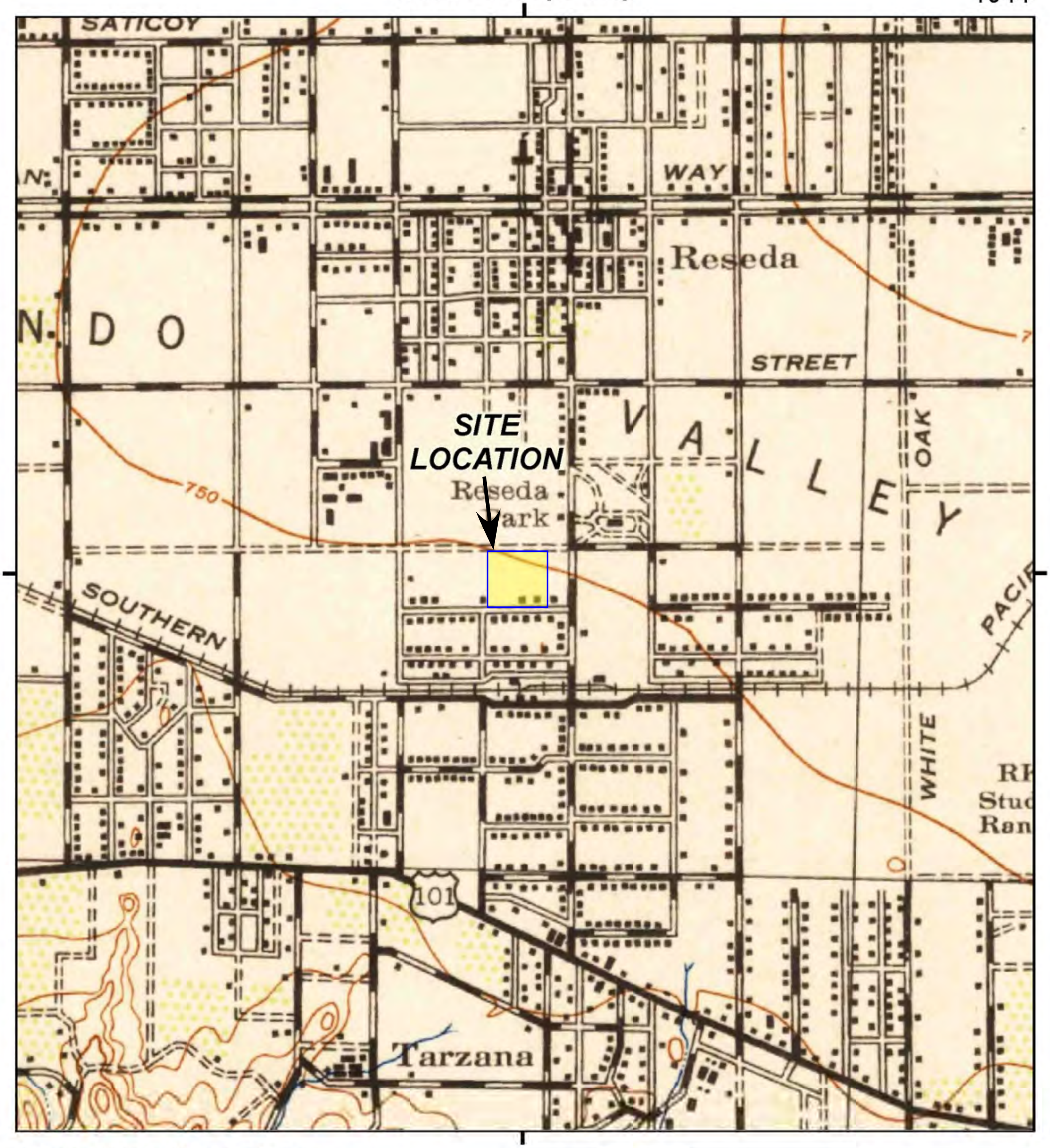
TP, Reseda, 1928, 7.5-minute
N, Zelzah, 1928, 7.5-minute

SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

N

Historical Topo Map

1944



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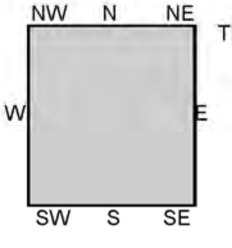
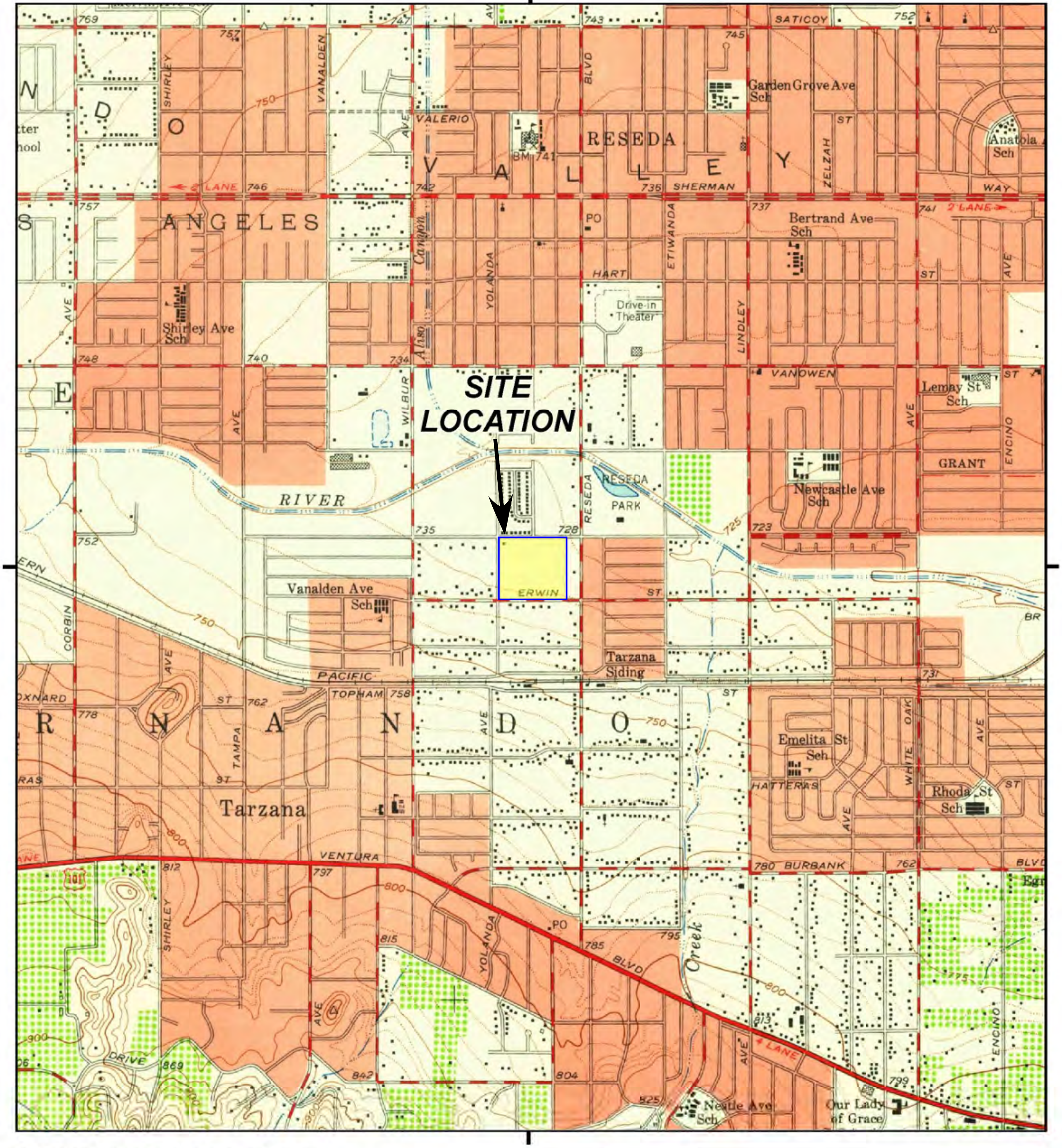


TP, Calabasas, 1944, 15-minute

SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

Historical Topo Map

1952



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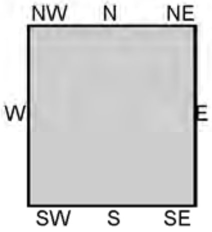
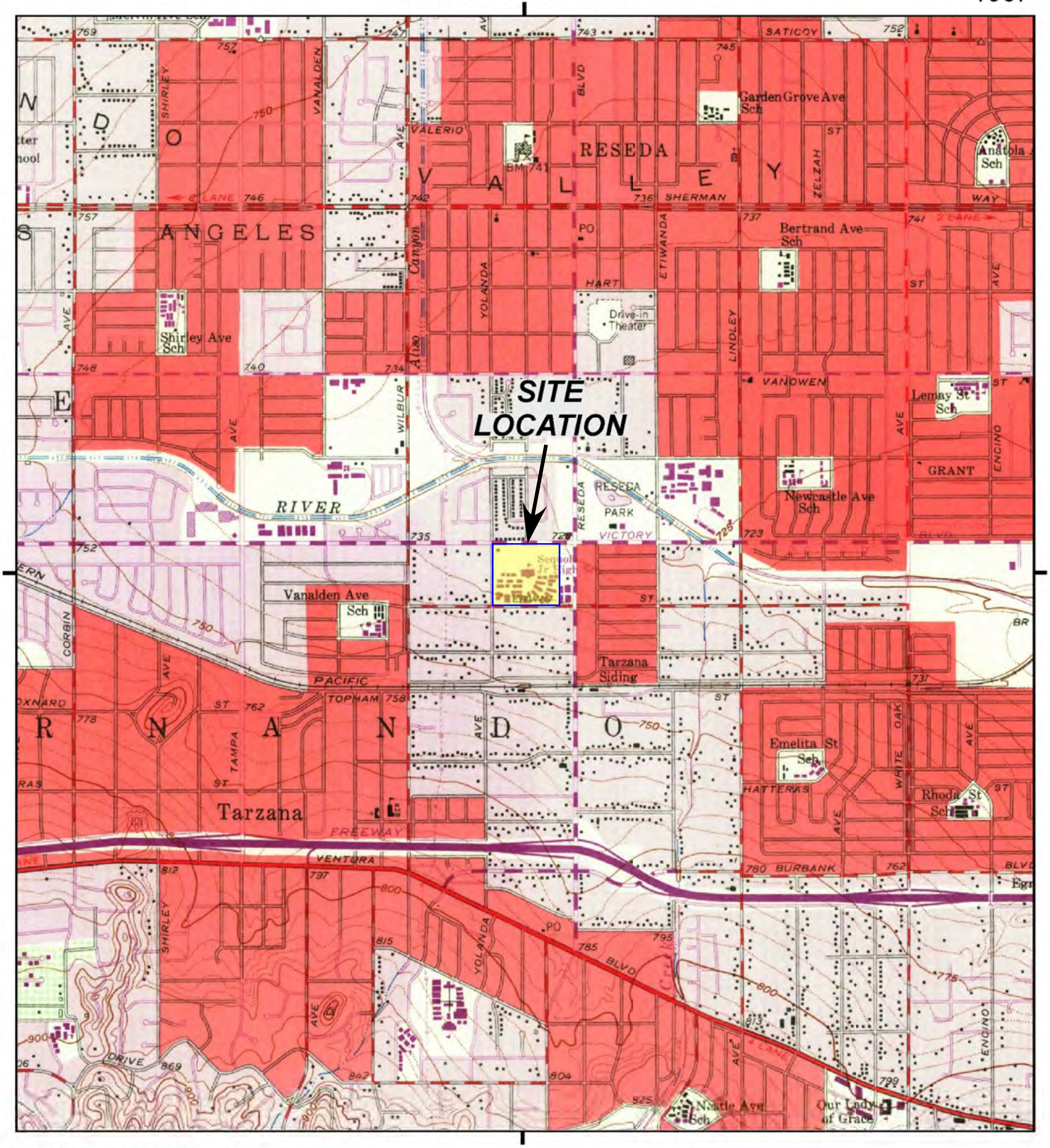


TP, Canoga Park, 1952, 7.5-minute

SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

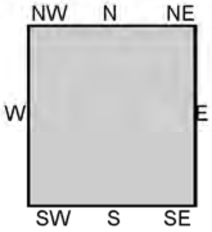
Historical Topo Map

1967



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

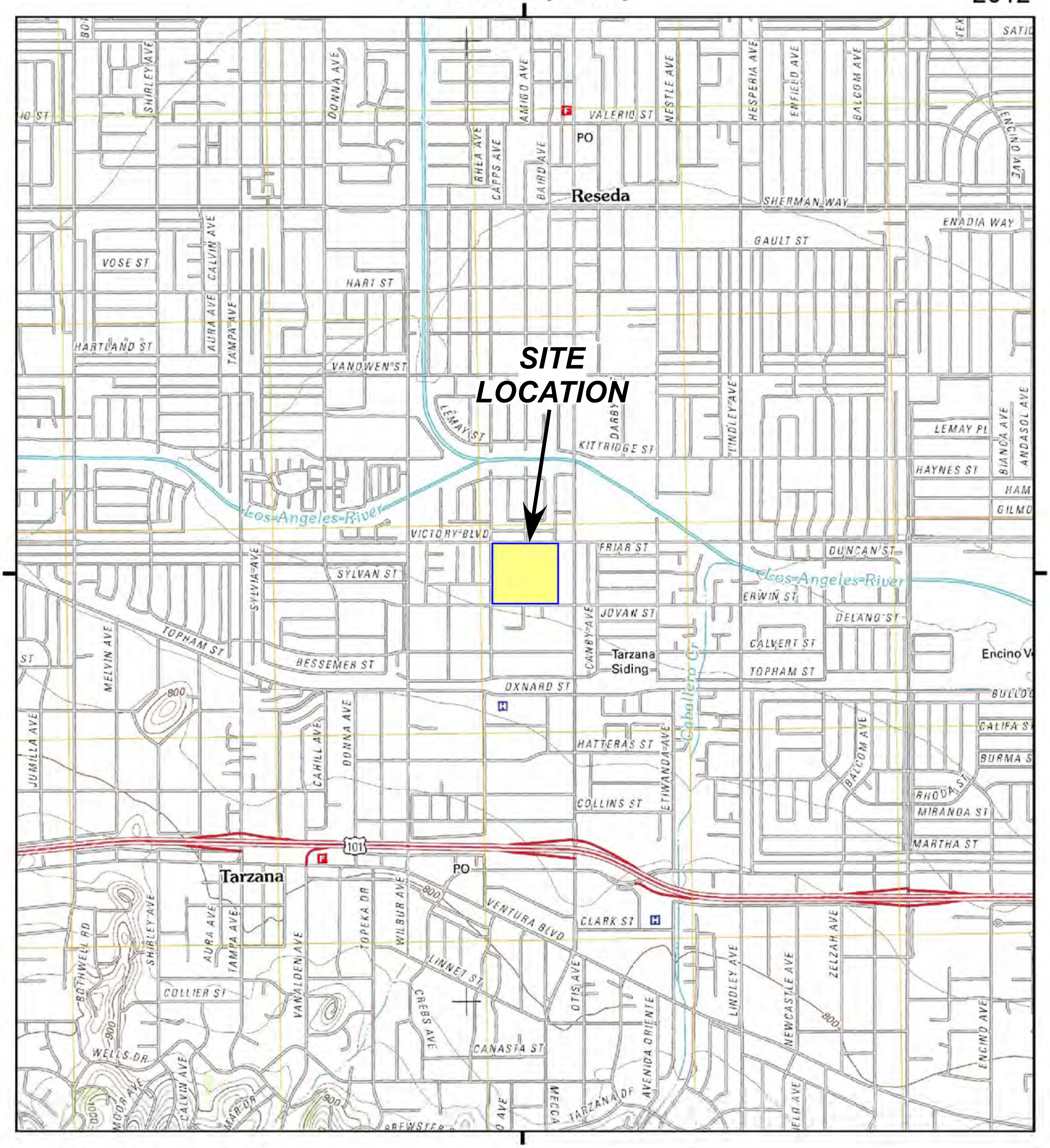


TP, Canoga Park, 1967, 7.5-minute

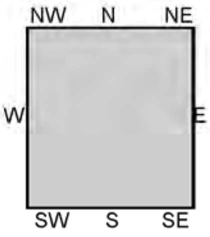
SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

Historical Topo Map

2012



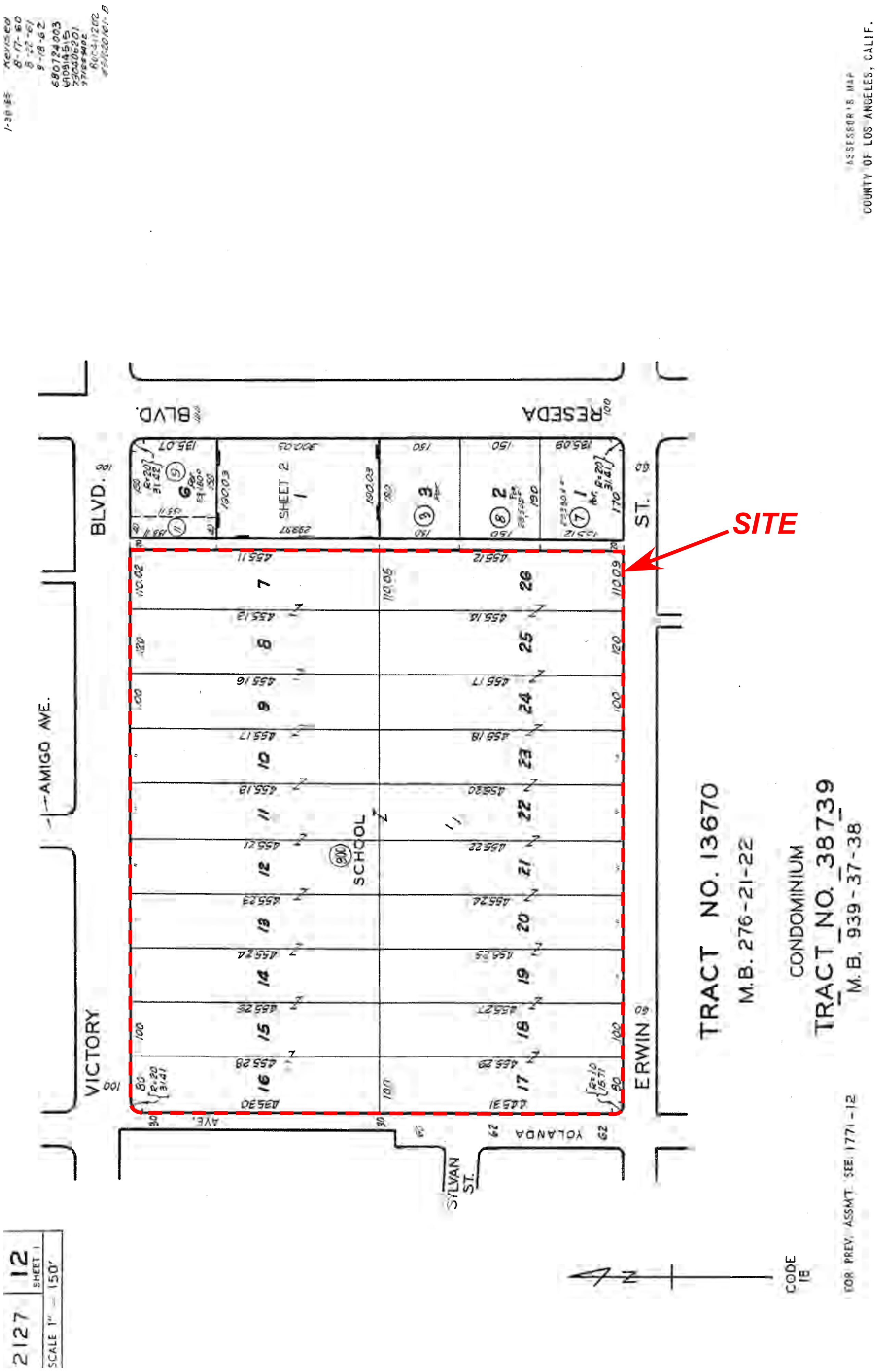
This report includes information from the following map sheet(s).



TP, Canoga Park, 2012, 7.5-minute

SITE NAME: Sherman Oaks Center For Enriched Stud
ADDRESS: 18605 Erwin Street
Reseda, CA 91335
CLIENT: Eco & Associates, Inc.

N


SITE
2127 12
SHEET 1
SCALE 1" = 150'
VICTORY BLVD.
RESEDA BLVD.
ERWIN ST.
AMIGO AVE.
YOLANDA AVE.
SYLVAN ST.
SCHOOL
SHEET 2
TRACT NO. 13670
M.B. 276-21-22
CONDOMINIUM
TRACT NO. 38739
M.B. 939-37-38
ASSESSOR'S MAP
COUNTY OF LOS ANGELES, CALIF.
FOR PREV. ASSMT. SEE: 1771-12
CODE 18
Revised
8-17-60
8-22-61
9-18-62

APPENDIX C

ENVIRONMENTAL DATABASE REVIEW

APPENDIX C – ENVIRONMENTAL DATABASE REVIEW

The Environmental Database Review of Appendix C is provided on the CD-ROM included with this report.

APPENDIX C

ENVIRONMENTAL DATABASE REVIEW

Sherman Oaks Center For Enriched Studies
18605 Erwin Street
Reseda, CA 91335

Inquiry Number: 4591788.2s
April 13, 2016

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

18605 ERWIN STREET
RESEDA, CA 91335

COORDINATES

Latitude (North):	34.1852460 - 34˚ 11' 6.88''
Longitude (West):	118.5386170 - 118˚ 32' 19.02''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	358211.7
UTM Y (Meters):	3783570.8
Elevation:	736 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5630737 CANOGA PARK, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120428
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
18605 ERWIN STREET
RESEDA, CA 91335

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	SHERMAN OAKS CENTER	18605 ERWIN ST	RCRA-LQG		TP
A2	LAUSD-SHERMAN OAKS C	18605 ERWIN ST	HAZNET		TP
A3	SHERMAN OAKS CENTER	18605 ERWIN ST	FINDS, ECHO		TP
A4	LAUSD/SHERMAN OAKS C	18605 ERWIN ST	HAZNET		TP
5		18564 ERWIN ST	EDR Hist Auto	Higher	538, 0.102, SSE
6	RESEDA/WOODLAND HILL	6015 BAIRD AV	UST, HIST UST	Higher	714, 0.135, SSE
B7	MOBIL 18-KMM 12567	18510 VICTORY BLVD	LUST, HIST UST, CHMIRS	Lower	755, 0.143, ENE
B8	GUIGO USA	18510 VICTORY BLVD	SWEEPS UST, CA FID UST	Lower	755, 0.143, ENE
B9	MOBIL SERVICE STATIO	18510 VICTORY BLVD	UST	Lower	755, 0.143, ENE
B10	EXXONMOBIL OIL CORPO	18510 VICTORY BLVD	RCRA-LQG	Lower	755, 0.143, ENE
B11	EXXON MOBIL OIL CORP	18510 VICTORY BVLD	RCRA-LQG	Lower	755, 0.143, ENE
12	VICTORY CLEANERS	18515 VICTORY BLVD	RCRA-SQG, FINDS, WIP, ECHO	Lower	773, 0.146, NE
C13	SHELL OIL CO	6360 RESEDA	LUST, RCRA NonGen / NLR, HIST CORTESE	Lower	976, 0.185, ENE
C14	RESEDA SHELL AUTO SE	6360 RESEDA BLVD UNI	RCRA-SQG, SWEEPS UST, HIST UST, CA FID UST	Lower	976, 0.185, ENE
15	PACIFIC OIL CO	6454 AMIGO AVE	RCRA NonGen / NLR, FINDS, HAZNET, HWT, ECHO	Lower	1078, 0.204, North
D16	JOSEPH CHAHANNE PROP	6100 RESEDA	SLIC	Higher	1763, 0.334, SSE
D17	JOSEPH CHAHANNA PROP	6100-6120 RESEDA BLV	SLIC	Higher	1763, 0.334, SSE
E18	NATIONAL HEAT TREATI	18600 OXNARD ST	RCRA-SQG, ENVIROSTOR, SWEEPS UST, HIST UST, CA FID	Higher	1969, 0.373, South
E19	COLUMBIA COLLEGE OF	18600 OXNARD STREET	ENVIROSTOR, VCP	Higher	1969, 0.373, South
20	ANCHOR	6616 RESEDA BLVD	LUST, SWEEPS UST, CA FID UST	Lower	2201, 0.417, NNE
F21	RESEDA DODGE	6625 RESEDA BLVD	RCRA-SQG, LUST, FINDS, HAZNET, ECHO	Lower	2218, 0.420, NNE
F22	RESEDA DODGE	6625 RESEDA BLVD	LUST, SWEEPS UST, CA FID UST, EMI	Lower	2218, 0.420, NNE
G23	RESEDA DIST MAINTENA	6015 BAIRD AVE	LUST, HIST CORTESE	Higher	2355, 0.446, South
G24	RESEDA/WOODLAMD HILL	6015 BAIRD AVENUE	SWF/LF	Higher	2362, 0.447, South
25	PARKING AREA	18408 OXNARD ST	LUST, HAZNET	Higher	2378, 0.450, SE
26	7027 CANBY AVENUE	7027 CANBY AVE.	ENVIROSTOR, SLIC, LA Co. Site Mitigation	Higher	4875, 0.923, NNE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SHERMAN OAKS CENTER 18605 ERWIN ST RESEDA, CA 91335	RCRA-LQG EPA ID:: CAR000192948	CAR000192948
LAUSD-SHERMAN OAKS C 18605 ERWIN ST RESEDA, CA 91335	HAZNET GEPAID: CAR000192948	N/A
SHERMAN OAKS CENTER 18605 ERWIN ST RESEDA, CA 91335	FINDS Registry ID:: 110037380544 ECHO	N/A
LAUSD/SHERMAN OAKS C 18605 ERWIN ST RESEDA, CA 91335	HAZNET GEPAID: CAD982352932	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
NPL LIENS	Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL	National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY	Federal Facility Site Information listing

SEMS	Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE	Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS	Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF	RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS	Land Use Control Information System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls

Federal ERNS list

ERNS	Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE	State Response Sites

State and tribal leaking storage tank lists

INDIAN LUST	Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST	Underground Storage Tank Listing
AST	Aboveground Petroleum Storage Tank Facilities
INDIAN UST	Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP	Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS	Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS	A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT	Waste Management Unit Database
SWRCY	Recycler Database
HAULERS	Registered Waste Tire Haulers Listing
INDIAN ODI	Report on the Status of Open Dumps on Indian Lands
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL	Delisted National Clandestine Laboratory Register
AOCONCERN	San Gabriel Valley Areas of Concern
HIST Cal-Sites	Historical Calsites Database
SCH	School Property Evaluation Program
CDL	Clandestine Drug Labs
Toxic Pits	Toxic Pits Cleanup Act Sites
US CDL	National Clandestine Laboratory Register

Local Land Records

LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information
DEED	Deed Restriction Listing

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CHMIRS	California Hazardous Material Incident Report System
LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data

EXECUTIVE SUMMARY

COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
LOS ANGELES CO. HMS	HMS: Street Number List
HWP	EnviroStor Permitted Facilities Listing
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
Notify 65	Proposition 65 Records
LA Co. Site Mitigation	Site Mitigation List
UIC	UIC Listing
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
FUELS PROGRAM	EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Cleaner	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 12/09/2015 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
EXXONMOBIL OIL CORPO	18510 VICTORY BLVD	ENE 1/8 - 1/4 (0.143 mi.)	B10	20
EXXON MOBIL OIL CORP	18510 VICTORY BVLD	ENE 1/8 - 1/4 (0.143 mi.)	B11	21

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 12/09/2015 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
VICTORY CLEANERS	***18515 VICTORY BLVD***	***NE 1/8 - 1/4 (0.146 mi.)***	***12***	***22***
RESEDA SHELL AUTO SE	***6360 RESEDA BLVD UNI***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C14***	***28***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 02/01/2016 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NATIONAL HEAT TREATI	***18600 OXNARD ST***	***S 1/4 - 1/2 (0.373 mi.)***	***E18***	***36***

Facility Id: 60002255 Status: Active				
COLUMBIA COLLEGE OF Facility Id: 60001214 Status: Active	***18600 OXNARD STREET***	***S 1/4 - 1/2 (0.373 mi.)***	***E19***	***42***
7027 CANBY AVENUE Facility Id: 19281225 Status: Inactive - Action Required	***7027 CANBY AVE.***	***NNE 1/2 - 1 (0.923 mi.)***	***26***	***69***

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 02/15/2016 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESEDA/WOODLAMD HILL Facility ID: 19-AR-1215 Operational Status: Active Regulation Status: Notification	6015 BAIRD AVENUE	S 1/4 - 1/2 (0.447 mi.)	G24	66

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 12/14/2015 has revealed that there are 7 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESEDA DIST MAINTENA Status: Completed - Case Closed Facility Id: 913560016 Status: Case Closed Global Id: T0603702346 Global ID: T0603702346	***6015 BAIRD AVE***	***S 1/4 - 1/2 (0.446 mi.)***	***G23***	***63***
PARKING AREA Status: Completed - Case Closed Global Id: T10000005383	***18408 OXNARD ST***	***SE 1/4 - 1/2 (0.450 mi.)***	***25***	***67***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL 18-KMM 12567 Status: Completed - Case Closed	***18510 VICTORY BLVD***	***ENE 1/8 - 1/4 (0.143 mi.)***	***B7***	***15***

Global Id: T0603731796				
SHELL OIL CO Status: Completed - Case Closed Facility Id: 913350925 Status: Leak being confirmed Global Id: T0603702243 Global ID: T0603702243	***6360 RESEDA***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C13***	***24***
ANCHOR Status: Completed - Case Closed Global Id: T0603764849	***6616 RESEDA BLVD***	***NNE 1/4 - 1/2 (0.417 mi.)***	***20***	***49***
RESEDA DODGE Facility Id: 913350970 Status: Pollution Characterization Global ID: T0603790019	***6625 RESEDA BLVD***	***NNE 1/4 - 1/2 (0.420 mi.)***	***F21***	***51***
RESEDA DODGE Status: Completed - Case Closed Global Id: T0603790019	***6625 RESEDA BLVD***	***NNE 1/4 - 1/2 (0.420 mi.)***	***F22***	***55***

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 12/14/2015 has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
JOSEPH CHAHANNE PROP Facility Status: No further action required	6100 RESEDA	SSE 1/4 - 1/2 (0.334 mi.)	D16	36
JOSEPH CHAHANNA PROP Facility Status: Completed - Case Closed Global Id: SL204AX1758	6100-6120 RESEDA BLV	SSE 1/4 - 1/2 (0.334 mi.)	D17	36

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board’s Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 12/14/2015 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESEDA/WOODLAND HILL Facility Id: 24514	***6015 BAIRD AV***	***SSE 1/8 - 1/4 (0.135 mi.)***	***6***	***13***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL SERVICE STATIO Facility Id: 24923	18510 VICTORY BLVD	ENE 1/8 - 1/4 (0.143 mi.)	B9	20

State and tribal voluntary cleanup sites

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 02/01/2016 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COLUMBIA COLLEGE OF Status: Active Facility Id: 60001214	***18600 OXNARD STREET***	***S 1/4 - 1/2 (0.373 mi.)***	***E19***	***42***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Registered Storage Tanks

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there are 2 SWEEPS UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GUIGO USA Status: A Comp Number: 6583	***18510 VICTORY BLVD***	***ENE 1/8 - 1/4 (0.143 mi.)***	***B8***	***19***
RESEDA SHELL AUTO SE Comp Number: 615	***6360 RESEDA BLVD UNI***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C14***	***28***

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 3 HIST UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESEDA/WOODLAND HILL Facility Id: 00000047173	***6015 BAIRD AV***	***SSE 1/8 - 1/4 (0.135 mi.)***	***6***	***13***

Lower Elevation	Address	Direction / Distance	Map ID	Page
MOBIL 18-KMM 12567 Facility Id: 00000039814	***18510 VICTORY BLVD***	***ENE 1/8 - 1/4 (0.143 mi.)***	***B7***	***15***
RESEDA SHELL AUTO SE	***6360 RESEDA BLVD UNI***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C14***	***28***

Facility Id: 00000005458

CA FID UST: The Facility Inventory Database contains active and inactive underground storage tank locations. The source is the State Water Resource Control Board.

A review of the CA FID UST list, as provided by EDR, and dated 10/31/1994 has revealed that there are 2 CA FID UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
GUIGO USA Facility Id: 19004048 Status: A	***18510 VICTORY BLVD***	***ENE 1/8 - 1/4 (0.143 mi.)***	***B8***	***19***
RESEDA SHELL AUTO SE Facility Id: 19003269 Status: A	***6360 RESEDA BLVD UNI***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C14***	***28***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 12/09/2015 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL OIL CO	***6360 RESEDA***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C13***	***24***
PACIFIC OIL CO	***6454 AMIGO AVE***	***N 1/8 - 1/4 (0.204 mi.)***	***15***	***30***

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 2 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RESEDA DIST MAINTENA Reg Id: 913560016	***6015 BAIRD AVE***	***S 1/4 - 1/2 (0.446 mi.)***	***G23***	***63***

Lower Elevation	Address	Direction / Distance	Map ID	Page
SHELL OIL CO Reg Id: 913350925	***6360 RESEDA***	***ENE 1/8 - 1/4 (0.185 mi.)***	***C13***	***24***

EXECUTIVE SUMMARY

HWT: A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

A review of the HWT list, as provided by EDR, and dated 01/11/2016 has revealed that there is 1 HWT site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC OIL CO Reg Num: 3115	***6454 AMIGO AVE***	***N 1/8 - 1/4 (0.204 mi.)***	***15***	***30***

WIP: Well Investigation Program case in the San Gabriel and San Fernando Valley area.

A review of the WIP list, as provided by EDR, and dated 07/03/2009 has revealed that there is 1 WIP site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
VICTORY CLEANERS Facility Status: Historical	***18515 VICTORY BLVD***	***NE 1/8 - 1/4 (0.146 mi.)***	***12***	***22***

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there is 1 EDR Hist Auto site within approximately 0.125 miles of the target property.

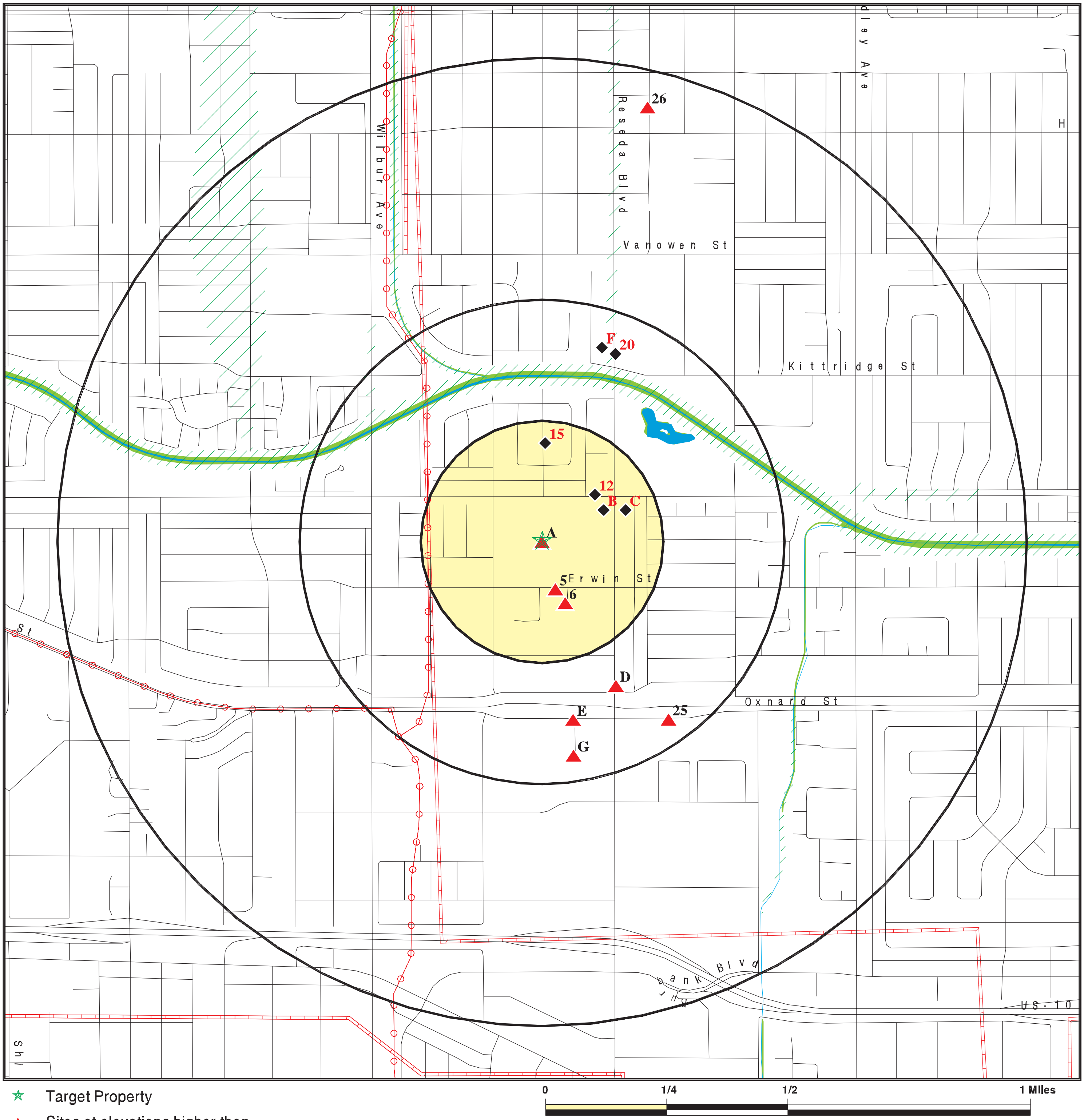
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
Not reported	18564 ERWIN ST	SSE 0 - 1/8 (0.102 mi.)	5	13

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
LOEHMANN’S PLAZA	SEMS-ARCHIVE
THRIFTY #133/ARCO #9584	LUST
MTA - BURBANK BRANCH LINE B-15C	SLIC

OVERVIEW MAP - 4591788.2S

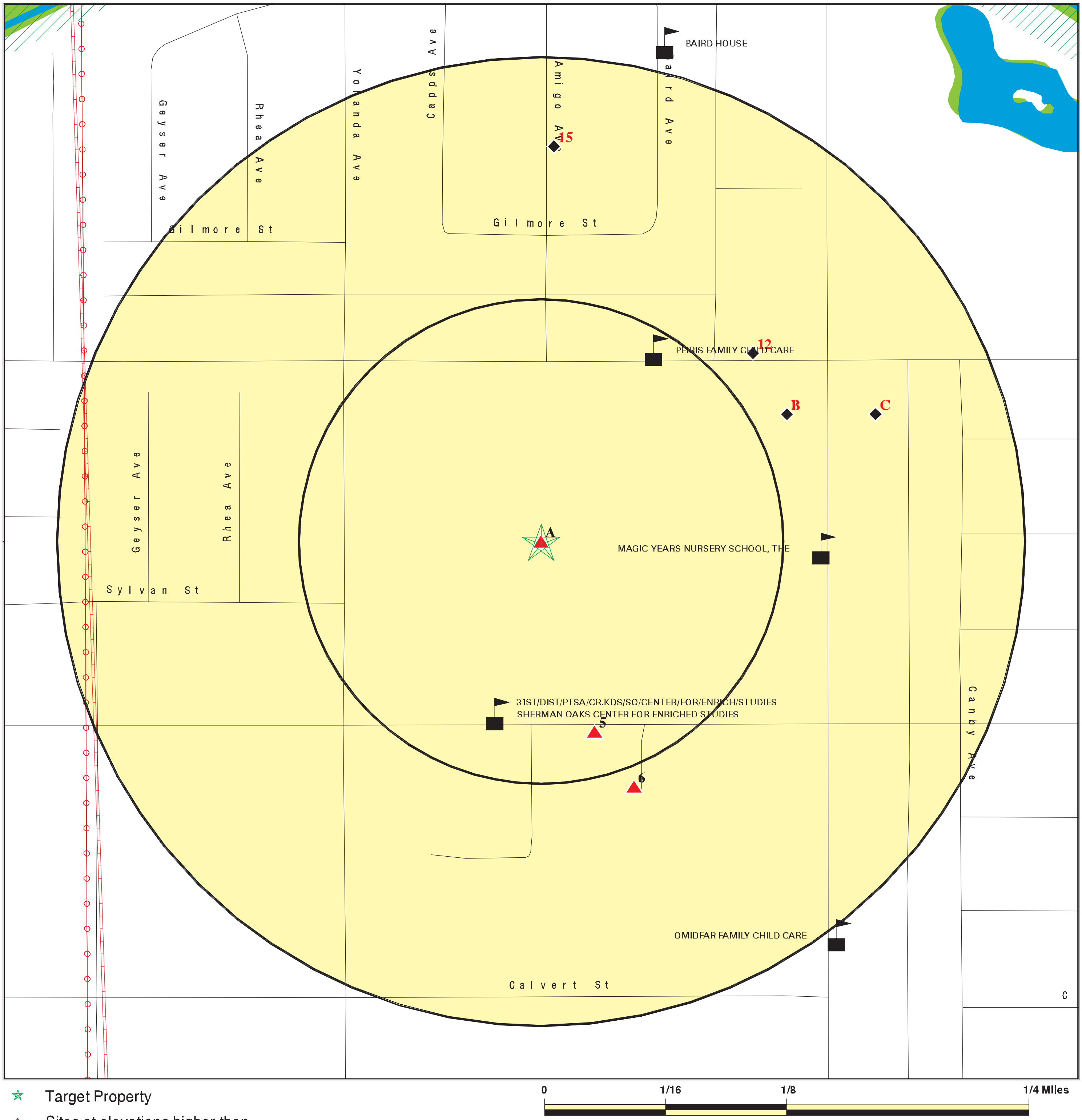


- ☆ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ♟ Manufactured Gas Plants
- ▨ National Priority List Sites
- ▨ Dept. Defense Sites
- ▨ Indian Reservations BIA
- ∿ Power transmission lines
- ∿ Pipelines
- ▨ 100-year flood zone
- ▨ 500-year flood zone
- 🟩 National Wetland Inventory
- 🟩 State Wetlands
- ▦ Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Sherman Oaks Center For Enriched Studies	CLIENT: Eco & Associates, Inc.
ADDRESS: 18605 Erwin Street Reseda CA 91335	CONTACT: Quin Kinnebrew
	INQUIRY #: 4591788.2s
LAT/LONG: 34.185246 / 118.538617	DATE: April 13, 2016 8:04 pm

DETAIL MAP - 4591788.2S



☆ Target Property
▲ Sites at elevations higher than or equal to the target property
◆ Sites at elevations lower than the target property
♟ Manufactured Gas Plants
⚑ Sensitive Receptors
▨ National Priority List Sites
▨ Dept. Defense Sites

▨ Indian Reservations BIA
Power transmission lines
Pipelines
▨ 100-year flood zone
▨ 500-year flood zone
🟩 National Wetland Inventory
🟩 State Wetlands

▦ Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sherman Oaks Center For Enriched Studies
ADDRESS:	18605 Erwin Street Reseda CA 91335
LAT/LONG:	34.185246 / 118.538617
CLIENT:	Eco & Associates, Inc.
CONTACT:	Quin Kinnebrew
INQUIRY #:	4591788.2s
DATE:	April 13, 2016 8:04 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250	1	0	2	NR	NR	NR	3
RCRA-SQG	0.250		0	2	NR	NR	NR	2
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	2	1	NR	3
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	1	NR	NR	1
State and tribal leaking storage tank lists								
LUST	0.500		0	2	5	NR	NR	7

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		0	0	2	NR	NR	2
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	2	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	1	NR	NR	1
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	2	NR	NR	NR	2
HIST UST	0.250		0	3	NR	NR	NR	3
CA FID UST	0.250		0	2	NR	NR	NR	2
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	2	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	2	NR	NR	NR	NR	NR	2
HIST CORTESE	0.500		0	1	1	NR	NR	2
LOS ANGELES CO. HMS	TP		NR	NR	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	1	NR	NR	NR	1
MINES	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
LA Co. Site Mitigation	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	1	NR	NR	NR	1
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
ECHO	TP	1	NR	NR	NR	NR	NR	1
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		1	NR	NR	NR	NR	1
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		5	1	20	12	1	0	39

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **Target** **Property**	**SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SCHOOL** **18605 ERWIN ST** **RESEDA, CA 91335**	**RCRA-LQG**	**1011488149** **CAR000192948**

Site 1 of 4 in cluster A

Actual:
736 ft.

RCRA-LQG:

Date form received by agency:	06/09/2008
Facility name:	SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SCHOOL
Facility address:	18605 ERWIN ST RESEDA, CA 91335
EPA ID:	CAR000192948
Mailing address:	333 S BEAUDRY AVE LAUSD OEHS 20TH FL LOS ANGELES, CA 90017
Contact:	SOE AUNG
Contact address:	333 S BEAUDRY AVE LAUSD OEHS 20TH FL LOS ANGELES, CA 90017
Contact country:	US
Contact telephone:	213-241-3904
Contact email:	SOE.AUNG@LAUSD.NET
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	SHERMAN OAKS CENTER FOR ENRICHED STUDIES
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	06/17/1988
Owner/Op end date:	Not reported
Owner/operator name:	LOS ANGELES UNIFIED SCHOOL DIST
Owner/operator address:	333 S BEAUDRY AVE LOS ANGELES, CA 90017
Owner/operator country:	US
Owner/operator telephone:	Not reported
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	06/17/1988
Owner/Op end date:	Not reported

Handler Activities Summary:

SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SCHOOL (Continued) **1011488149**

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D008
. Waste name: LEAD

Violation Status: No violations found

A2 **LAUSD-SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SC** **HAZNET** **S113178637**
Target **18605 ERWIN ST** **N/A**
Property **RESEDA, CA 91335**

Site 2 of 4 in cluster A

Actual:
736 ft.

HAZNET:
envid: S113178637
Year: 2013
GEPAID: CAR000192948
Contact: SOE AUNG
Telephone: 2137455939
Mailing Name: Not reported
Mailing Address: 333 S BEAUNDRY AVE 28TH FLR
Mailing City,St,Zip: LOS ANGELES, CA 900170000
Gen County: Los Angeles
TSD EPA ID: CAD009007626
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 0.4
Cat Decode: Not reported
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County: Not reported

envid: S113178637
Year: 2012
GEPAID: CAR000192948
Contact: SOE AUNG
Telephone: 2137455939
Mailing Name: Not reported
Mailing Address: 333 S BEAUNDRY AVE 28TH FLR
Mailing City,St,Zip: LOS ANGELES, CA 900170000
Gen County: Los Angeles
TSD EPA ID: CAD028409019
TSD County: Los Angeles

LAUSD-SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SC (Continued) **S113178637**

Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.1425
Cat Decode: Not reported
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

envid: S113178637
Year: 2010
GEPAID: CAR000192948
Contact: SOE AUNG
Telephone: 2137455939
Mailing Name: Not reported
Mailing Address: 333 S BEAUNDRY AVE 28TH FLR
Mailing City,St,Zip: LOS ANGELES, CA 900170000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons: 0.85
Cat Decode: Unspecified organic liquid mixture
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

envid: S113178637
Year: 2010
GEPAID: CAR000192948
Contact: SOE AUNG
Telephone: 2137455939
Mailing Name: Not reported
Mailing Address: 333 S BEAUNDRY AVE 28TH FLR
Mailing City,St,Zip: LOS ANGELES, CA 900170000
Gen County: Not reported
TSD EPA ID: CAD028409019
TSD County: Not reported
Waste Category: Laboratory waste chemicals
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.2
Cat Decode: Laboratory waste chemicals
Method Decode: Fuel Blending Prior To Energy Recovery At Another Site
Facility County: Los Angeles

envid: S113178637
Year: 2009
GEPAID: CAR000192948
Contact: SOE AUNG / ECM
Telephone: 2132413199
Mailing Name: Not reported
Mailing Address: 333 S BEAUDRY AVE 20TH FLOOR
Mailing City,St,Zip: LOS ANGELES, CA 900170000
Gen County: Not reported
TSD EPA ID: CAD028409019

LAUSD-SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SC (Continued) **S113178637**

TSD County:	Not reported
Waste Category:	Laboratory waste chemicals
Disposal Method:	Fuel Blending Prior To Energy Recovery At Another Site
Tons:	0.225
Cat Decode:	Laboratory waste chemicals
Method Decode:	Fuel Blending Prior To Energy Recovery At Another Site
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
2 additional CA_HAZNET: record(s) in the EDR Site Report.

A3 **SHERMAN OAKS CENTER FOR ENRICHED STUDIES MAGNET SCHOOL** **FINDS** **1011917953**
Target **18605 ERWIN ST** **ECHO** **N/A**
Property **RESEDA, CA 91335**

Site 3 of 4 in cluster A

Actual:
736 ft.

FINDS:

Registry ID: 110037380544

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ECHO:

Envid:	1011917953
Registry ID:	110037380544
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110037380544

A4 **LAUSD/SHERMAN OAKS C E S** **HAZNET** **S113015331**
Target **18605 ERWIN ST** **N/A**
Property **RESEDA, CA 91335**

Site 4 of 4 in cluster A

Actual:
736 ft.

HAZNET:

envid:	S113015331
Year:	2010
GEPAID:	CAD982352932
Contact:	SOE AUNG / ECM
Telephone:	2132413199
Mailing Name:	Not reported
Mailing Address:	333 S BEAUDRY AVE 20TH FLOOR
Mailing City,St,Zip:	Los Angeles, CA 900170000
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Other organic solids
Disposal Method:	Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

LAUSD/SHERMAN OAKS C E S (Continued) **S113015331**

Tons: 0.1
Cat Decode: Other organic solids
Method Decode: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Facility County: Los Angeles

envid: S113015331
Year: 2008
GEPAID: CAD982352932
Contact: SOE AUNG
Telephone: 2132413199
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: AZC950823111
TSD County: Not reported
Waste Category: Asbestos containing waste
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 4
Cat Decode: Asbestos containing waste
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County: Los Angeles

envid: S113015331
Year: 2008
GEPAID: CAD982352932
Contact: SOE AUNG
Telephone: 2132413199
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: CAD009007626
TSD County: Not reported
Waste Category: Asbestos containing waste
Disposal Method: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons: 64.8
Cat Decode: Asbestos containing waste
Method Decode: Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County: Los Angeles

envid: S113015331
Year: 2002
GEPAID: CAD982352932
Contact: YI HWA KIM DEPUTY DIRECTOR
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported

LAUSD/SHERMAN OAKS C E S (Continued) **S113015331**

Waste Category: Other organic solids
Disposal Method: Disposal, Land Fill
Tons: 0.2
Cat Decode: Other organic solids
Method Decode: Disposal, Land Fill
Facility County: Los Angeles

envid: S113015331
Year: 2001
GEPAID: CAD982352932
Contact: YI HWA KIM DEPUTY DIRECTOR
Telephone: 2137435086
Mailing Name: Not reported
Mailing Address: 333 S Beaudry Ave 20th Fl
Mailing City,St,Zip: Los Angeles, CA 900170000
Gen County: Not reported
TSD EPA ID: WAD991281767
TSD County: Not reported
Waste Category: Other inorganic solid waste
Disposal Method: Disposal, Land Fill
Tons: 0.15
Cat Decode: Other inorganic solid waste
Method Decode: Disposal, Land Fill
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
5 additional CA_HAZNET: record(s) in the EDR Site Report.

5
SSE
< 1/8
0.102 mi.
538 ft.

18564 ERWIN ST
RESEDA, CA 91335

EDR Hist Auto **1015285434**
N/A

Relative:
Higher

Actual:
738 ft.

EDR Historical Auto Stations:
Name: FAR EAST AUTO BODY
Year: 1999
Address: 18564 ERWIN ST

6
SSE
1/8-1/4
0.135 mi.
714 ft.

RESEDA/WOODLAND HILLS YARD
6015 BAIRD AV
RESEDA, CA 91335

UST **U001567494**
HIST UST **N/A**

Relative:
Higher

Actual:
740 ft.

UST:
Facility ID: 24514
Permitting Agency: LOS ANGELES, CITY OF
Latitude: 34.20253
Longitude: -118.53733

HIST UST:
File Number: 000270C8
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/000270C8.pdf
Region: STATE
Facility ID: 00000047173

RESEDA/WOODLAND HILLS YARD (Continued) **U001567494**

Facility Type: Other
Other Type: SERVICE YARD
Contact Name: WILLIAM TURNER
Telephone: 8189898009
Owner Name: CITY OF LOS ANGELES
Owner Address: 111 E FIRST STREET
Owner City,St,Zip: LOS ANGELES, CA 90012
Total Tanks: 0005

Tank Num: 001
Container Num: 0091
Year Installed: 1977
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 0091A
Year Installed: Not reported
Tank Capacity: 00001500
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 0092
Year Installed: 1976
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 0093
Year Installed: 1976
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: Not reported
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 005
Container Num: D 215 W
Year Installed: 1973
Tank Capacity: 00000550
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: None

Click here for Geo Tracker PDF:

B7 **MOBIL 18-KMM 12567** **LUST** **U001567868**
ENE **18510 VICTORY BLVD** **HIST UST** **N/A**
1/8-1/4 **RESEDA, CA 91335** **CHMIRS**
0.143 mi.
755 ft. **Site 1 of 5 in cluster B**

Relative:
Lower

Actual:
733 ft.

LUST:
Region: STATE
Global Id: T0603731796
Latitude: 34.186245
Longitude: -118.536436
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 01/13/2009
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: AT
Local Agency: LOS ANGELES, CITY OF
RB Case Number: 913350998
LOC Case Number: 11172
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603731796
Contact Type: Regional Board Caseworker
Contact Name: ARMAN TOUMARI
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 WEST 4TH STREET, SUITE 200
City: LOS ANGELES
Email: atoumari@waterboards.ca.gov
Phone Number: 2135766708

Global Id: T0603731796
Contact Type: Local Agency Caseworker
Contact Name: ELOY LUNA
Organization Name: LOS ANGELES, CITY OF
Address: 200 North Main Street, Suite 1780
City: LOS ANGELES
Email: eloy.luna@lacity.org
Phone Number: Not reported

Status History:
Global Id: T0603731796
Status: Completed - Case Closed
Status Date: 01/13/2009

Global Id: T0603731796
Status: Open - Case Begin Date
Status Date: 06/24/2002

Global Id: T0603731796
Status: Open - Site Assessment
Status Date: 06/24/2002

Global Id: T0603731796

MOBIL 18-KMM 12567 (Continued) **U001567868**

Status: Open - Site Assessment
Status Date: 02/25/2008

Regulatory Activities:

Global Id: T0603731796
Action Type: RESPONSE
Date: 02/25/2008
Action: Preliminary Site Assessment Report

Global Id: T0603731796
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603731796
Action Type: ENFORCEMENT
Date: 09/23/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0603731796
Action Type: ENFORCEMENT
Date: 11/21/2008
Action: Notification - Preclosure

Global Id: T0603731796
Action Type: ENFORCEMENT
Date: 10/19/2008
Action: Site Visit / Inspection / Sampling

Global Id: T0603731796
Action Type: Other
Date: 06/24/2002
Action: Leak Reported

Global Id: T0603731796
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603731796
Action Type: ENFORCEMENT
Date: 01/13/2009
Action: Closure/No Further Action Letter

Global Id: T0603731796
Action Type: Other
Date: 06/24/2002
Action: Leak Discovery

Global Id: T0603731796
Action Type: RESPONSE
Date: 11/15/2007
Action: Other Report / Document

Global Id: T0603731796
Action Type: ENFORCEMENT
Date: 10/30/2007

MOBIL 18-KMM 12567 (Continued) **U001567868**

Action: Staff Letter

Global Id: T0603731796
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

HIST UST:
File Number: 00027F5A
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027F5A.pdf
Region: STATE
Facility ID: 00000039814
Facility Type: Gas Station
Other Type: Not reported
Contact Name: Not reported
Telephone: 8183452410
Owner Name: MOBIL OIL CORPORATION
Owner Address: 612 SOUTH FLOWER STREET
Owner City,St,Zip: LOS ANGELES, CA 90017
Total Tanks: 0004

Tank Num: 001
Container Num: 0840
Year Installed: 1969
Tank Capacity: 00000280
Tank Used for: WASTE
Type of Fuel: WASTE OIL
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 0841
Year Installed: 1969
Tank Capacity: 00009940
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: 0842
Year Installed: 1971
Tank Capacity: 00006000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

Tank Num: 004
Container Num: 0843
Year Installed: 1969
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: Not reported
Leak Detection: Stock Inventor

MOBIL 18-KMM 12567 (Continued) **U001567868**

Click here for Geo Tracker PDF:

CHMIRS:

OES Incident Number:	2-0347
OES notification:	01/18/2002
OES Date:	Not reported
OES Time:	Not reported
Date Completed:	**Not reported**
Property Use:	Not reported
Agency Id Number:	Not reported
Agency Incident Number:	Not reported
Time Notified:	Not reported
Time Completed:	Not reported
Surrounding Area:	Not reported
Estimated Temperature:	Not reported
Property Management:	Not reported
More Than Two Substances Involved?:	Not reported
Resp Agncy Personel # Of Decontaminated:	Not reported
Responding Agency Personel # Of Injuries:	Not reported
Responding Agency Personel # Of Fatalities:	Not reported
Others Number Of Decontaminated:	Not reported
Others Number Of Injuries:	Not reported
Others Number Of Fatalities:	Not reported
Vehicle Make/year:	Not reported
Vehicle License Number:	Not reported
Vehicle State:	Not reported
Vehicle Id Number:	Not reported
CA DOT PUC/ICC Number:	Not reported
Company Name:	Not reported
Reporting Officer Name/ID:	Not reported
Report Date:	Not reported
Facility Telephone:	Not reported
Waterway Involved:	No
Waterway:	Not reported
Spill Site:	Not reported
Cleanup By:	Unknown
Containment:	Not reported
What Happened:	Not reported
Type:	Not reported
Measure:	Not reported
Other:	Not reported
Date/Time:	Not reported
Year:	2002
Agency:	Veeder-Root
Incident Date:	1/18/200212:00:00 AM
Admin Agency:	L. A. County Fire Prevention
Amount:	Not reported
Contained:	Unknown
Site Type:	Service Station
E Date:	Not reported
Substance:	Gasoline
Gallons:	0.000000
Unknown:	0
Substance #2:	Not reported
Substance #3:	Not reported
Evacuations:	0
Number of Injuries:	0

MOBIL 18-KMM 12567 (Continued) **U001567868**

Number of Fatalities:	0
#1 Pipeline:	Not reported
#2 Pipeline:	Not reported
#3 Pipeline:	Not reported
#1 Vessel >= 300 Tons:	Not reported
#2 Vessel >= 300 Tons:	Not reported
#3 Vessel >= 300 Tons:	Not reported
Evacs:	Not reported
Injuries:	Not reported
Fatals:	Not reported
Comments:	Not reported
Description:	Per caller, a customer hit a gasoline filling pump. It is only suspected at this time that a release may have occurred and contained in a secondary containment under ground. Situation still under investigation.

B8
ENE
1/8-1/4
0.143 mi.
755 ft.

GUIGO USA
18510 VICTORY BLVD
RESEDA, CA 91335

Site 2 of 5 in cluster B

SWEEPS UST **S101583500**
CA FID UST **N/A**

Relative:
Lower

Actual:
733 ft.

SWEEPS UST:

Status:	Active
Comp Number:	6583
Number:	9
Board Of Equalization:	Not reported
Referral Date:	04-22-93
Action Date:	04-22-93
Created Date:	02-29-88
Owner Tank Id:	Not reported
SWRCB Tank Id:	Not reported
Tank Status:	Not reported
Capacity:	Not reported
Active Date:	Not reported
Tank Use:	Not reported
STG:	Not reported
Content:	Not reported
Number Of Tanks:	Not reported

CA FID UST:

Facility ID:	19004048
Regulated By:	UTNKA
Regulated ID:	Not reported
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	8183452425
Mail To:	Not reported
Mailing Address:	18510 VICTORY BLVD
Mailing Address 2:	Not reported
Mailing City,St,Zip:	RESEDA 913350000
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported

GUIGO USA (Continued) **S101583500**

Comments: Not reported
Status: Active

B9
ENE
1/8-1/4
0.143 mi.
755 ft.

MOBIL SERVICE STATION KMM
18510 VICTORY BLVD
RESEDA, CA 91335

UST **U003781253**
N/A

Site 3 of 5 in cluster B

Relative:
Lower

Actual:
733 ft.

UST:

Facility ID:	24923
Permitting Agency:	LOS ANGELES, CITY OF
Latitude:	34.187593
Longitude:	-118.535088

B10
ENE
1/8-1/4
0.143 mi.
755 ft.

EXXONMOBIL OIL CORPORATION 12567
18510 VICTORY BLVD
RESEDA, CA 91335

RCRA-LQG **1010562207**
CAR000188235

Site 4 of 5 in cluster B

Relative:
Lower

Actual:
733 ft.

RCRA-LQG:

Date form received by agency:	10/24/2007
Facility name:	EXXONMOBIL OIL CORPORATION 12567
Facility address:	18510 VICTORY BLVD RESEDA, CA 91335
EPA ID:	CAR000188235
Mailing address:	16945 NORTHCHASE DR RM 538 HOUSTON, TX 77060
Contact:	DALE VIATOR
Contact address:	16945 NORTHCHASE DR RM 538 HOUSTON, TX 77060
Contact country:	US
Contact telephone:	281-654-8470
Contact email:	DALE.VIATOR@EXXONMOBIL.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	EXXONMOBIL OIL CORPORATION
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported

EXXONMOBIL OIL CORPORATION 12567 (Continued) **1010562207**

Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/01/1999
Owner/Op end date: Not reported

Owner/operator name: HEIDI GALKE
Owner/operator address: 18510 VICTORY BLVD
RESEDA, CA 91335
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 07/28/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D008
. Waste name: LEAD

. Waste code: D018
. Waste name: BENZENE

Violation Status: No violations found

B11 **EXXON MOBIL OIL CORP** **RCRA-LQG** **1007200047**
ENE **18510 VICTORY BVLD** **CAL000050526**
1/8-1/4 **RESEDA, CA 91335**
0.143 mi.
755 ft. **Site 5 of 5 in cluster B**

Relative:
Lower

Actual:
733 ft.

RCRA-LQG:
Date form received by agency: 02/28/2002
Facility name: EXXON MOBIL OIL CORP
Facility address: 18510 VICTORY BVLD
RESEDA, CA 91335

EXXON MOBIL OIL CORP (Continued) **1007200047**

EPA ID:	CAL000050526
Mailing address:	12265 W BAYAUD AVE LAKEWOOD, CO 80228
Contact:	JOHN HOOVER
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	(800) 253-8054
Contact email:	Not reported
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

12
NE
1/8-1/4
0.146 mi.
773 ft.

VICTORY CLEANERS
18515 VICTORY BLVD
RESEDA, CA 91335

RCRA-SQG
FINDS
WIP
ECHO

1000594403
CAD983582313

Relative:
Lower

Actual:
733 ft.

RCRA-SQG:

Date form received by agency:	05/22/1991
Facility name:	VICTORY CLEANERS
Facility address:	18515 VICTORY BLVD RESEDA, CA 91335
EPA ID:	CAD983582313
Mailing address:	VICTORY BLVD RESEDA, CA 91335
Contact:	GABRIEL GABRIELIAN

VICTORY CLEANERS (Continued) **1000594403**

Contact address:	18515 VICTORY BLVD RESEDA, CA 91335
Contact country:	US
Contact telephone:	(818) 344-6518
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	GABRIELIAN GABRIEL
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002844307

VICTORY CLEANERS (Continued) **1000594403**

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

WIP:

Region:	4
File Number:	110.0040
File Status:	**Historical**
Staff:	AVELOZ
Facility Suite:	Not reported

ECHO:

Envid:	1000594403
Registry ID:	110002844307
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002844307

C13
ENE
1/8-1/4
0.185 mi.
976 ft.

SHELL OIL CO
6360 RESEDA
RESEDA, CA 91335

LUST
RCRA NonGen / NLR
HIST CORTESE

1000288411
CAD981405335

Site 1 of 2 in cluster C

Relative:
Lower

Actual:
732 ft.

LUST:

Region:	STATE
Global Id:	T0603702243
Latitude:	34.186253
Longitude:	-118.535643
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/02/1996
Lead Agency:	LOS ANGELES, CITY OF
Case Worker:	WR
Local Agency:	LOS ANGELES, CITY OF
RB Case Number:	913350925
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603702243
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

SHELL OIL CO (Continued) **1000288411**

Global Id:	T0603702243
Contact Type:	Local Agency Caseworker
Contact Name:	TBD
Organization Name:	LOS ANGELES, CITY OF
Address:	200 N. MAIN ST. RM. 970
City:	LOS ANGELES
Email:	Not reported
Phone Number:	2134826528

Status History:

Global Id:	T0603702243
Status:	Completed - Case Closed
Status Date:	10/02/1996
Global Id:	T0603702243
Status:	Open - Case Begin Date
Status Date:	05/18/1989
Global Id:	T0603702243
Status:	Open - Site Assessment
Status Date:	10/26/1991

Regulatory Activities:

Global Id:	T0603702243
Action Type:	Other
Date:	05/18/1989
Action:	Leak Discovery
Global Id:	T0603702243
Action Type:	Other
Date:	10/26/1991
Action:	Leak Reported

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	913350925
Status:	Leak being confirmed
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603702243
W Global ID:	Not reported
Staff:	UNK
Local Agency:	19050
Cross Street:	VICTORY
Enforcement Type:	Not reported
Date Leak Discovered:	5/18/1989
Date Leak First Reported:	10/26/1991
Date Leak Record Entered:	12/10/1991
Date Confirmation Began:	10/26/1991
Date Leak Stopped:	Not reported

SHELL OIL CO (Continued) **1000288411**

Date Case Last Changed on Database: 12/12/1991
Date the Case was Closed: Not reported
How Leak Discovered: OM
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: OLD CASENO WAS 121291-06
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 5238.8598839678837089073082785
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: SHELL OIL COMPANY
RP Address: 511 N BROOKHURST ST, ANAHEIM, 92081
Program: LUST
Lat/Long: 34.1857859 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

RCRA NonGen / NLR:
Date form received by agency: 10/12/2000
Facility name: SHELL OIL CO
Facility address: 6360 RESEDA
RESEDA, CA 91335
EPA ID: CAD981405335
Mailing address: P O BOX 4453
HOUSTON, TX 772104453
Contact: SONDRA BIENVENU
Contact address: 777 WALKER ST
HOUSTON, TX 77002
Contact country: US
Contact telephone: (713) 241-5036
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

SHELL OIL CO (Continued) **1000288411**

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	EQUILON ENTERPRISES LLC
Owner/operator address:	P O BOX 4453 HOUSTON, TX 77210
Owner/operator country:	Not reported
Owner/operator telephone:	(713) 241-2258
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

. Waste code:	D001
. Waste name:	IGNITABLE WASTE

. Waste code:	D018
. Waste name:	BENZENE

Historical Generators:

Date form received by agency:	09/01/1996
Site name:	SHELL OIL CO
Classification:	Small Quantity Generator

Violation Status: No violations found

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	913350925

C14 **ENE** **1/8-1/4** **0.185 mi.** **976 ft.**	**RESEDA SHELL AUTO SERVICE** **6360 RESEDA BLVD UNIT B** **RESEDA, CA 91335** **Site 2 of 2 in cluster C**	**RCRA-SQG** **SWEEPS UST** **HIST UST** **CA FID UST**	**1000596659** **CAD983606344**

Relative:
Lower

Actual:
732 ft.

RCRA-SQG:

Date form received by agency:	08/13/1991
Facility name:	RESEDA SHELL AUTO SERVICE
Facility address:	6360 RESEDA BLVD UNIT B RESEDA, CA 91335
EPA ID:	CAD983606344
Mailing address:	RESEDA BLVD UNIT B RESEDA, CA 91335
Contact:	JOHN JOSEPH RAMIREZ
Contact address:	6360 RESEDA BLVD UNIT B RESEDA, CA 91335
Contact country:	US
Contact telephone:	(818) 705-8191
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	JOHN J RAMIREZ
Owner/operator address:	6360 RESEDA BLVD RESEDA, CA 91335
Owner/operator country:	Not reported
Owner/operator telephone:	(818) 705-8191
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

RESEDA SHELL AUTO SERVICE (Continued) **1000596659**

SWEEPS UST:
Status: Not reported
Comp Number: 615
Number: Not reported
Board Of Equalization: 44-011304
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: 0

HIST UST:
File Number: 00028451
URL: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00028451.pdf
Region: STATE
Facility ID: 00000005458
Facility Type: Gas Station
Other Type: Not reported
Contact Name: FAWZI SIMIN
Telephone: 8187058191
Owner Name: SHELL OIL COMPANY
Owner Address: P.O. BOX 4848
Owner City,St,Zip: ANAHEIM, CA 92803
Total Tanks: 0004

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 002
Container Num: 2
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 003
Container Num: 3
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM

RESEDA SHELL AUTO SERVICE (Continued) **1000596659**

Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Tank Num: 004
Container Num: 4
Year Installed: Not reported
Tank Capacity: 00010000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Container Construction Thickness: 1/4
Leak Detection: Stock Inventor, Groundwater Monitoring Well, 10

Click here for Geo Tracker PDF:

CA FID UST:
Facility ID: 19003269
Regulated By: UTNKA
Regulated ID: 00005458
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 8187058191
Mail To: Not reported
Mailing Address: P O BOX
Mailing Address 2: Not reported
Mailing City,St,Zip: RESEDA 913350000
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported
Status: Active

15
North
1/8-1/4
0.204 mi.
1078 ft.

PACIFIC OIL CO
6454 AMIGO AVE
RESEDA, CA 91335

RCRA NonGen / NLR
FINDS
HAZNET
HWT
ECHO

1000597535
CAD983615501

Relative:
Lower

Actual:
734 ft.

RCRA NonGen / NLR:
Date form received by agency: 12/30/1991
Facility name: PACIFIC OIL CO
Facility address: 6454 AMIGO AVE
RESEDA, CA 91335
EPA ID: CAD983615501
Contact: OLGA SHAPIO
Contact address: 19528 VENTURA BL STE 388
TARZANA, CA 91356
Contact country: US
Contact telephone: (818) 996-9965
Contact email: Not reported
EPA Region: 09
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

PACIFIC OIL CO (Continued) **1000597535**

Owner/Operator Summary:

Owner/operator name:	OLGA SHAPIRO
Owner/operator address:	19528 VENTRUA BLVD STE 388 TARZANA, CA 91356
Owner/operator country:	Not reported
Owner/operator telephone:	(818) 996-9965
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	Yes
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Facility Has Received Notices of Violations:

Regulation violated:	Not reported
Area of violation:	Transporters - General
Date violation determined:	02/01/2002
Date achieved compliance:	05/02/2002
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	02/04/2002
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Regulation violated:	Not reported
Area of violation:	Generators - General
Date violation determined:	02/01/2002
Date achieved compliance:	05/02/2002
Violation lead agency:	State
Enforcement action:	WRITTEN INFORMAL
Enforcement action date:	02/04/2002
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

PACIFIC OIL CO (Continued) **1000597535**

Regulation violated: Not reported
Area of violation: Transporters - Manifest and Recordkeeping
Date violation determined: 02/01/2002
Date achieved compliance: 05/02/2002
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 02/04/2002
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Transporters - General
Date violation determined: 02/01/2002
Date achieved compliance: 05/02/2002
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 06/24/2002
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 39070
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Transporters - General
Date violation determined: 02/01/2002
Date achieved compliance: 05/02/2002
Violation lead agency: State
Enforcement action: FINAL 3008(A) COMPLIANCE ORDER
Enforcement action date: 10/14/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 26000
Paid penalty amount: Not reported

Regulation violated: FR - 263
Area of violation: Transporters - General
Date violation determined: 03/15/1993
Date achieved compliance: 03/24/1993
Violation lead agency: State
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 03/15/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: 1500
Final penalty amount: Not reported
Paid penalty amount: Not reported

PACIFIC OIL CO (Continued) **1000597535**

Evaluation Action Summary:

Evaluation date:	05/02/2002
Evaluation:	NOT A SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	02/01/2002
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Transporters - Manifest and Recordkeeping
Date achieved compliance:	05/02/2002
Evaluation lead agency:	State
Evaluation date:	02/01/2002
Evaluation:	SIGNIFICANT NON-COMPLIER
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	02/01/2002
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	05/02/2002
Evaluation lead agency:	State
Evaluation date:	02/01/2002
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Transporters - General
Date achieved compliance:	05/02/2002
Evaluation lead agency:	State
Evaluation date:	10/02/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Transporters - General
Date achieved compliance:	03/24/1993
Evaluation lead agency:	State

FINDS:

Registry ID: 110002866382

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

envid: 1000597535

PACIFIC OIL CO (Continued) **1000597535**

Year: 2014
GEPAID: CAD983615501
Contact: SERGIO SHAPIRO
Telephone: 8189969965
Mailing Name: Not reported
Mailing Address: 19528 VENTURA BLVD STE #388
Mailing City,St,Zip: TARZANA, CA 913560000
Gen County: Los Angeles
TSD EPA ID: AZR000509950
TSD County: 99
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Tons: 5.054
Cat Decode: Waste oil and mixed oil
Method Decode: Not reported
Facility County: Los Angeles

envid: 1000597535
Year: 2014
GEPAID: CAD983615501
Contact: SERGIO SHAPIRO
Telephone: 8189969965
Mailing Name: Not reported
Mailing Address: 19528 VENTURA BLVD STE #388
Mailing City,St,Zip: TARZANA, CA 913560000
Gen County: Los Angeles
TSD EPA ID: AZR000509950
TSD County: 99
Waste Category: Unspecified aqueous solution
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 19.32
Cat Decode: Unspecified aqueous solution
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

envid: 1000597535
Year: 2014
GEPAID: CAD983615501
Contact: SERGIO SHAPIRO
Telephone: 8189969965
Mailing Name: Not reported
Mailing Address: 19528 VENTURA BLVD STE #388
Mailing City,St,Zip: TARZANA, CA 913560000
Gen County: Los Angeles
TSD EPA ID: AZR000509950
TSD County: 99
Waste Category: Not reported
Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons: 4.02405
Cat Decode: Not reported
Method Decode: Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County: Los Angeles

PACIFIC OIL CO (Continued) **1000597535**

envid:	1000597535
Year:	2014
GEPAID:	CAD983615501
Contact:	SERGIO SHAPIRO
Telephone:	8189969965
Mailing Name:	Not reported
Mailing Address:	19528 VENTURA BLVD STE #388
Mailing City,St,Zip:	TARZANA, CA 913560000
Gen County:	Los Angeles
TSD EPA ID:	AZR000509950
TSD County:	99
Waste Category:	Waste oil and mixed oil
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	1215.8708
Cat Decode:	Waste oil and mixed oil
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Los Angeles

envid:	1000597535
Year:	2013
GEPAID:	CAD983615501
Contact:	OLGA SHAPIRO
Telephone:	8189969965
Mailing Name:	Not reported
Mailing Address:	19528 VENTURA BLVD STE #388
Mailing City,St,Zip:	TARZANA, CA 913560000
Gen County:	Los Angeles
TSD EPA ID:	AZR000509950
TSD County:	Not reported
Waste Category:	Not reported
Disposal Method:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Tons:	213.788
Cat Decode:	Not reported
Method Decode:	Other Recovery Of Reclamation For Reuse Including Acid Regeneration, Organics Recovery Ect
Facility County:	Not reported

Click this hyperlink while viewing on your computer to access
275 additional CA_HAZNET: record(s) in the EDR Site Report.

HWT:

Reg Num:	3115
Expiration Date:	03/31/2016

ECHO:

Envid:	1000597535
Registry ID:	110002866382
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110002866382

D16 **JOSEPH CHAHANNE PROPERTY** **SLIC** **S106387164**
SSE **6100 RESEDA** **N/A**
1/4-1/2 **RESEDA, CA 91335**
0.334 mi.
1763 ft. **Site 1 of 2 in cluster D**

Relative:
Higher

Actual:
747 ft.

SLIC REG 4:

Region:	4
Facility Status:	No further action required
SLIC:	0931
Substance:	VOCs
Staff:	Wendy Liu

D17 **JOSEPH CHAHANNA PROPERTY** **SLIC** **S106484047**
SSE **6100-6120 RESEDA BLVD** **N/A**
1/4-1/2 **RESEDA, CA**
0.334 mi.
1763 ft. **Site 2 of 2 in cluster D**

Relative:
Higher

Actual:
747 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	08/08/2001
Global Id:	SL204AX1758
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	34.2007457243243
Longitude:	-118.540087562162
Case Type:	Cleanup Program Site
Case Worker:	LM
Local Agency:	Not reported
RB Case Number:	0931
File Location:	Not reported
Potential Media Affected:	Not reported
Potential Contaminants of Concern:	Not reported
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

E18 **NATIONAL HEAT TREATING CO INC** **RCRA-SQG** **1000260479**
South **18600 OXNARD ST** **ENVIROSTOR** **CAD008509853**
1/4-1/2 **TARZANA, CA 91356** **SWEEPS UST**
0.373 mi. **HIST UST**
1969 ft. **Site 1 of 2 in cluster E** **CA FID UST**
EMI
WDS

Relative:
Higher

Actual:
752 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	NATIONAL HEAT TREATING CO INC
Facility address:	18600 OXNARD ST TARZANA, CA 91356
EPA ID:	CAD008509853
Contact:	Not reported
Contact address:	Not reported Not reported
Contact country:	US
Contact telephone:	Not reported

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NATIONAL HEAT TREATING CO INC
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Historical Generators:

Date form received by agency:	07/07/1980
Site name:	NATIONAL HEAT TREATING CO INC
Classification:	Large Quantity Generator

Violation Status: No violations found

ENVIROSTOR:
Facility ID: 60002255

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

Status:	Active
Status Date:	08/31/2015
Site Code:	530115
Site Type:	Corrective Action
Site Type Detailed:	Corrective Action
Acres:	1.25
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Manjul Bose
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Assembly:	, 45
Senate:	, 27
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	0
Longitude:	0
APN:	NONE SPECIFIED
Past Use:	MANUFACTURING - METAL, METAL FINISHING
Potential COC:	Under Investigation Tetrachloroethylene (PCE Trichloroethylene (TCE Chromium VI
Confirmed COC:	Tetrachloroethylene (PCE Trichloroethylene (TCE Under Investigation
Potential Description:	CSS, IA, OTH, SOIL, SV, UE
Alias Name:	CAD008509853
Alias Type:	EPA Identification Number
Alias Name:	530115
Alias Type:	Project Code (Site Code)
Alias Name:	60001214
Alias Type:	Envirostor ID Number
Alias Name:	60002255
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2013
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/11/2011
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	01/20/2015
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Consent Agreement
Completed Date:	09/01/2015

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	RFI Workplan
Completed Date:	01/13/2016
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SWEEPS UST:

Status:	Not reported
Comp Number:	2781
Number:	Not reported
Board Of Equalization:	44-012524
Referral Date:	Not reported
Action Date:	Not reported
Created Date:	Not reported
Owner Tank Id:	Not reported
SWRCB Tank Id:	19-050-002781-000001
Tank Status:	Not reported
Capacity:	1
Active Date:	Not reported
Tank Use:	CHEMICAL
STG:	PRODUCT
Content:	UNKNOWN
Number Of Tanks:	1

HIST UST:

File Number:	00027892
URL:	http://geotracker.waterboards.ca.gov/ustpdfs/pdf/00027892.pdf
Region:	STATE
Facility ID:	00000050727
Facility Type:	Other
Other Type:	BRAZING & HEAT TREAT
Contact Name:	Not reported
Telephone:	8189962310
Owner Name:	NATIONAL HEAT TREATING CO. INC
Owner Address:	18600 OXNARD ST.
Owner City,St,Zip:	TARZANA, CA 91356
Total Tanks:	0001
Tank Num:	001
Container Num:	1
Year Installed:	Not reported
Tank Capacity:	00000000
Tank Used for:	PRODUCT
Type of Fuel:	Not reported

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

Container Construction Thickness:	Not reported
Leak Detection:	Visual

Click here for Geo Tracker PDF:

CA FID UST:

Facility ID:	19028642
Regulated By:	UTNKI
Regulated ID:	00050727
Cortese Code:	Not reported
SIC Code:	Not reported
Facility Phone:	8189962310
Mail To:	Not reported
Mailing Address:	18600 OXNARD ST
Mailing Address 2:	Not reported
Mailing City,St,Zip:	TARZANA 913560000
Contact:	Not reported
Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Inactive

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	13484
Air District Name:	SC
SIC Code:	3398
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	8
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	13484
Air District Name:	SC
SIC Code:	3398
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	13
Reactive Organic Gases Tons/Yr:	3
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	1
SOX - Oxides of Sulphur Tons/Yr:	0

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

Year: 1995
County Code: 19
Air Basin: SC
Facility ID: 13484
Air District Name: SC
SIC Code: 3398
Air District Name: SOUTH COAST AQMD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 1
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 2
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smllr Tons/Yr: 0

WDS:

Facility ID: 4 19I001083
Facility Type: Other - Does not fall into the category of Municipal/Domestic, Industrial, Agricultural or Solid Waste (Class I, II or III)
Facility Status: Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number: CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion: 4
Facility Telephone: 8184330216
Facility Contact: Phill Stella
Agency Name: BODYCOTE THERMO PROCESSING
Agency Address: Not reported
Agency City,St,Zip: 0
Agency Contact: Not reported
Agency Telephone: Not reported
Agency Type: Private
SIC Code: 3398
SIC Code 2: Not reported
Primary Waste Type: Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Primary Waste: STORMS
Waste Type2: Not reported
Waste2: Stormwater Runoff
Primary Waste Type: Nonhazardous Solid Wastes/Influent or Solid Wastes that contain nonhazardous putrescible and non putrescible solid, semisolid, and liquid wastes (E.G., garbage, trash, refuse, paper, demolition and construction wastes, manure, vegetable or animal solid and semisolid waste).
Secondary Waste: Not reported
Secondary Waste Type: Not reported
Design Flow: 0
Baseline Flow: 0
Reclamation: No reclamation requirements associated with this facility.

NATIONAL HEAT TREATING CO INC (Continued) **1000260479**

POTW:	The facility is not a POTW.
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

E19 **South** **1/4-1/2** **0.373 mi.** **1969 ft.**	**COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY)** **18600 OXNARD STREET** **TARZANA, CA 91356** **Site 2 of 2 in cluster E**	**ENVIROSTOR** **VCP**	**S118353706** **N/A**

Relative:
Higher

Actual:
752 ft.

ENVIROSTOR:

Facility ID:	60001214
Status:	Active
Status Date:	11/30/2009
Site Code:	301481
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	1.25
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Manjul Bose
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Assembly:	45
Senate:	27
Special Program:	Voluntary Cleanup Program
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	34.17995
Longitude:	-118.5374
APN:	2156-006-019
Past Use:	MANUFACTURING - METAL, METAL FINISHING
Potential COC:	Under Investigation Benzene Tetrachloroethylene (PCE Trichloroethylene (TCE
Confirmed COC:	Benzene Tetrachloroethylene (PCE Trichloroethylene (TCE
Potential Description:	OTH, SOIL, SV
Alias Name:	COLUMBIA COLLEGE OF HOLLYWOOD
Alias Type:	Alternate Name
Alias Name:	FORMER BODYCOTE FACILITY
Alias Type:	Alternate Name
Alias Name:	2156-006-019
Alias Type:	APN
Alias Name:	301481
Alias Type:	Project Code (Site Code)
Alias Name:	60001214
Alias Type:	Envirostor ID Number

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Alias Name:	60002255
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	11/28/2009
Comments:	VCA Signed on 11/28/2009, Uploaded to EnviroStor on 11/30/2009

Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Notice of Exemption
Completed Date:	03/14/2012
Comments:	Filed with OPR

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/04/2011
Comments:	Invite Letters sent out to bodycote and former property owners.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Feasibility Study Report
Completed Date:	01/21/2010
Comments:	RP needs to conduct further investigation prior to submittal of FS.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Risk Assessment Report
Completed Date:	06/14/2010
Comments:	RP is pursuing an SubSlab Depressurization System to be installed soon.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	06/28/2010
Comments:	RP is not planning on taking this course proposed in workplan.

Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	03/04/2011
Comments:	SSDS Pilot test workplan has been approved.

Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	03/13/2012
Comments:	iRAW approval after public comment period and CEQA approval.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Community Profile
Completed Date:	12/27/2011
Comments:	Final Community Profile

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	12/27/2011
Comments:	Fact Sheet Completed, Comment period started 12/27/2011
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	12/28/2011
Comments:	Indoor air monitoring report reviewed by Tox. No concerns at present moment since SSDS system is going to be activated soon.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	05/15/2012
Comments:	Fieldwork complete.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedy Constructed: Operating Properly & Successfully
Completed Date:	06/04/2013
Comments:	RACR Approved
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	06/28/2013
Comments:	reviewed and approved.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/30/2013
Comments:	completed
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	11/12/2013
Comments:	Sent email comments. No issues noted.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Plan
Completed Date:	04/03/2014
Comments:	Not reported
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	09/03/2014
Comments:	Approval letter sent.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Completed Document Type:	Monitoring Report
Completed Date:	07/31/2015
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	09/03/2015
Comments:	Not reported
Completed Area Name:	Bodycote Facility
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2013
Comments:	Correspondence Sent!
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2013
Comments:	Correspondence Sent
Completed Area Name:	Bodycote Facility
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	01/20/2015
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

VCP:

Facility ID:	60001214
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	1.25
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Manjul Bose
Supervisor:	Javier Hinojosa
Division Branch:	Cleanup Chatsworth
Site Code:	301481
Assembly:	45
Senate:	27
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	11/30/2009

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	34.17995 / -118.5374
APN:	2156-006-019
Past Use:	MANUFACTURING - METAL, METAL FINISHING
Potential COC:	31001, 30003, 30022, 30027
Confirmed COC:	30003,30022,30027
Potential Description:	OTH, SOIL, SV
Alias Name:	COLUMBIA COLLEGE OF HOLLYWOOD
Alias Type:	Alternate Name
Alias Name:	FORMER BODYCOTE FACILITY
Alias Type:	Alternate Name
Alias Name:	2156-006-019
Alias Type:	APN
Alias Name:	301481
Alias Type:	Project Code (Site Code)
Alias Name:	60001214
Alias Type:	Envirostor ID Number
Alias Name:	60002255
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	11/28/2009
Comments:	VCA Signed on 11/28/2009, Uploaded to EnviroStor on 11/30/2009
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Notice of Exemption
Completed Date:	03/14/2012
Comments:	Filed with OPR
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/04/2011
Comments:	Invite Letters sent out to bodycote and former property owners.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Feasibility Study Report
Completed Date:	01/21/2010
Comments:	RP needs to conduct further investigation prior to submittal of FS.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Risk Assessment Report
Completed Date:	06/14/2010
Comments:	RP is pursuing an SubSlab Depressurization System to be installed soon.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	06/28/2010
Comments:	RP is not planning on taking this course proposed in workplan.

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Pilot Study/Treatability Workplan
Completed Date:	03/04/2011
Comments:	SSDS Pilot test workplan has been approved.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	03/13/2012
Comments:	iRAW approval after public comment period and CEQA approval.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Community Profile
Completed Date:	12/27/2011
Comments:	Final Community Profile
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Fact Sheets
Completed Date:	12/27/2011
Comments:	Fact Sheet Completed, Comment period started 12/27/2011
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	12/28/2011
Comments:	Indoor air monitoring report reviewed by Tox. No concerns at present moment since SSDS system is going to be activated soon.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	05/15/2012
Comments:	Fieldwork complete.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Remedy Constructed: Operating Properly & Successfully
Completed Date:	06/04/2013
Comments:	RACR Approved
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	06/28/2013
Comments:	reviewed and approved.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Report
Completed Date:	09/30/2013
Comments:	completed
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported

COLUMBIA COLLEGE OF HOLLYWOOD (FORMER BODYCOTE FACILITY) (Continued) **S118353706**

Completed Document Type:	Monitoring Report
Completed Date:	11/12/2013
Comments:	Sent email comments. No issues noted.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Operations and Maintenance Plan
Completed Date:	04/03/2014
Comments:	Not reported
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	09/03/2014
Comments:	Approval letter sent.
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	07/31/2015
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	09/03/2015
Comments:	Not reported
Completed Area Name:	Bodycote Facility
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2013
Comments:	Correspondence Sent!
Completed Area Name:	CCH Building
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	02/21/2013
Comments:	Correspondence Sent
Completed Area Name:	Bodycote Facility
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	01/20/2015
Comments:	Not reported
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

20 **NNE** **1/4-1/2** **0.417 mi.** **2201 ft.**	**ANCHOR** **6616 RESEDA BLVD** **RESEDA, CA 91335**	**LUST** **SWEEPS UST** **CA FID UST**	**S101584292** **N/A**

Relative:
Lower

Actual:
729 ft.

LUST:
Region: STATE
Global Id: T0603764849
Latitude: 34.190741
Longitude: -118.535715
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 07/29/2011
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: JW
Local Agency: Not reported
RB Case Number: 913351025
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603764849
Contact Type: Regional Board Caseworker
Contact Name: JIMMIE WOO
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 WEST 4TH STREET, SUITE 200
City: LOS ANGELES
Email: jwoo@waterboards.ca.gov
Phone Number: 2135766600

Status History:
Global Id: T0603764849
Status: Completed - Case Closed
Status Date: 07/29/2011

Global Id: T0603764849
Status: Open - Case Begin Date
Status Date: 01/24/1990

Global Id: T0603764849
Status: Open - Site Assessment
Status Date: 07/12/1990

Regulatory Activities:
Global Id: T0603764849
Action Type: ENFORCEMENT
Date: 04/21/2011
Action: Referral to Regional Board - #1

Global Id: T0603764849
Action Type: RESPONSE
Date: 07/15/2011
Action: Other Report / Document

ANCHOR (Continued) **S101584292**

Global Id: T0603764849
Action Type: Other
Date: 03/15/1990
Action: Leak Reported

Global Id: T0603764849
Action Type: Other
Date: 01/24/1990
Action: Leak Discovery

Global Id: T0603764849
Action Type: ENFORCEMENT
Date: 05/13/2011
Action: Staff Letter

Global Id: T0603764849
Action Type: ENFORCEMENT
Date: 07/29/2011
Action: Closure/No Further Action Letter

SWEEPS UST:
Status: Not reported
Comp Number: 5268
Number: Not reported
Board Of Equalization: Not reported
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: Not reported
Tank Status: Not reported
Capacity: Not reported
Active Date: Not reported
Tank Use: Not reported
STG: Not reported
Content: Not reported
Number Of Tanks: 0

CA FID UST:
Facility ID: 19010278
Regulated By: UTNKI
Regulated ID: Not reported
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2130000000
Mail To: Not reported
Mailing Address: 6616 RESEDA BLVD
Mailing Address 2: Not reported
Mailing City,St,Zip: RESEDA 913350000
Contact: Not reported
Contact Phone: Not reported
DUNs Number: Not reported
NPDES Number: Not reported
EPA ID: Not reported
Comments: Not reported

ANCHOR (Continued) **S101584292**

Status: Inactive

F21 **NNE** **1/4-1/2** **0.420 mi.** **2218 ft.**	**RESEDA DODGE** **6625 RESEDA BLVD** **RESEDA, CA 91335** **Site 1 of 2 in cluster F**	**RCRA-SQG** **LUST** **FINDS** **HAZNET** **ECHO**	**1000201314** **CAD981677578**

Relative:
Lower

Actual:
729 ft.

RCRA-SQG:

Date form received by agency:	10/06/1986
Facility name:	RESEDA DODGE
Facility address:	6625 RESEDA BLVD RESEDA, CA 91335
EPA ID:	CAD981677578
Contact:	ENVIRONMENTAL MANAGER
Contact address:	6625 RESEDA BLVD LOS ANGELES, CA 91333
Contact country:	US
Contact telephone:	(818) 345-4001
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported
Owner/operator name:	BENSON HAROLD
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No

RESEDA DODGE (Continued) **1000201314**

Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	913350970
Status:	Pollution Characterization
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Excavate and Treat
Global ID:	T0603790019
W Global ID:	Not reported
Staff:	CEC
Local Agency:	19050
Cross Street:	Not reported
Enforcement Type:	LET
Date Leak Discovered:	5/29/1987
Date Leak First Reported:	2/4/2001
Date Leak Record Entered:	Not reported
Date Confirmation Began:	Not reported
Date Leak Stopped:	5/29/1987
Date Case Last Changed on Database:	9/20/2001
Date the Case was Closed:	Not reported
How Leak Discovered:	Repair Tank
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	Tank
Operator:	RESEDA DODGE
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	3506.4565115176275040852865206
Source of Cleanup Funding:	Tank
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	10/1/2003
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	5/29/2003
Hist Max MTBE Conc in Groundwater:	47
Hist Max MTBE Conc in Soil:	.005
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	=
Soil Qualifier:	=
Organization:	Not reported

RESEDA DODGE (Continued) **1000201314**

Owner Contact:	Not reported
Responsible Party:	MR. HORMOZ RAMY
RP Address:	6625 RESEDA BLVD.
Program:	LUST
Lat/Long:	34.19069 / -1
Local Agency Staff:	PEJ
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	Not reported

FINDS:

Registry ID: 110008271985

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

envid:	1000201314
Year:	2005
GEPAID:	CAD981677578
Contact:	MATT MORRISON SERVICE MANAGER
Telephone:	8183454001
Mailing Name:	Not reported
Mailing Address:	6625 RESEDA BLVD
Mailing City,St,Zip:	RESEDA, CA 913355314
Gen County:	Not reported
TSD EPA ID:	CAT080013352
TSD County:	Not reported
Waste Category:	Unspecified aqueous solution
Disposal Method:	Recycler
Tons:	0.2
Cat Decode:	Unspecified aqueous solution
Method Decode:	Recycler
Facility County:	Los Angeles

envid:	1000201314
Year:	2005
GEPAID:	CAD981677578
Contact:	MATT MORRISON SERVICE MANAGER
Telephone:	8183454001
Mailing Name:	Not reported
Mailing Address:	6625 RESEDA BLVD
Mailing City,St,Zip:	RESEDA, CA 913355314
Gen County:	Not reported
TSD EPA ID:	CAT000646117
TSD County:	Not reported

RESEDA DODGE (Continued) **1000201314**

Waste Category: Other organic solids
Disposal Method: Disposal, Land Fill
Tons: 8.42
Cat Decode: Other organic solids
Method Decode: Disposal, Land Fill
Facility County: Los Angeles

envid: 1000201314
Year: 2005
GEPAID: CAD981677578
Contact: MATT MORRISON SERVICE MANAGER
Telephone: 8183454001
Mailing Name: Not reported
Mailing Address: 6625 RESEDA BLVD
Mailing City,St,Zip: RESEDA, CA 913355314
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Oil/water separation sludge
Disposal Method: Recycler
Tons: 0.41
Cat Decode: Oil/water separation sludge
Method Decode: Recycler
Facility County: Los Angeles

envid: 1000201314
Year: 2005
GEPAID: CAD981677578
Contact: MATT MORRISON SERVICE MANAGER
Telephone: 8183454001
Mailing Name: Not reported
Mailing Address: 6625 RESEDA BLVD
Mailing City,St,Zip: RESEDA, CA 913355314
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Tons: 0.58
Cat Decode: Unspecified organic liquid mixture
Method Decode: Recycler
Facility County: Los Angeles

envid: 1000201314
Year: 2005
GEPAID: CAD981677578
Contact: MATT MORRISON SERVICE MANAGER
Telephone: 8183454001
Mailing Name: Not reported
Mailing Address: 6625 RESEDA BLVD
Mailing City,St,Zip: RESEDA, CA 913355314
Gen County: Not reported
TSD EPA ID: CAT000613893
TSD County: Not reported
Waste Category: Aqueous solution with total organic residues less than 10 percent
Disposal Method: Transfer Station
Tons: 0.31

RESEDA DODGE (Continued) **1000201314**

Cat Decode:	Aqueous solution with total organic residues less than 10 percent
Method Decode:	Transfer Station
Facility County:	Los Angeles

Click this hyperlink while viewing on your computer to access
22 additional CA_HAZNET: record(s) in the EDR Site Report.

ECHO:

Envid:	1000201314
Registry ID:	110008271985
DFR URL:	http://echo.epa.gov/detailed_facility_report?fid=110008271985

F22	**RESEDA DODGE**	**LUST**	**S101618441**
NNE	**6625 RESEDA BLVD**	**SWEEPS UST**	**N/A**
1/4-1/2	**RESEDA, CA 91335**	**CA FID UST**	
0.420 mi.		**EMI**	
2218 ft.	**Site 2 of 2 in cluster F**		

Relative:
Lower

Actual:
729 ft.

LUST:

Region:	STATE
Global Id:	T0603790019
Latitude:	34.19069
Longitude:	-118.536265
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	02/24/2012
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	AT
Local Agency:	LOS ANGELES, CITY OF
RB Case Number:	913350970
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603790019
Contact Type:	Local Agency Caseworker
Contact Name:	ELOY LUNA
Organization Name:	LOS ANGELES, CITY OF
Address:	200 North Main Street, Suite 1780
City:	LOS ANGELES
Email:	eloy.luna@lacity.org
Phone Number:	Not reported

Global Id:	T0603790019
Contact Type:	Regional Board Caseworker
Contact Name:	ARMAN TOUMARI
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	atoumari@waterboards.ca.gov
Phone Number:	2135766708

RESEDA DODGE (Continued) **S101618441**

Status History:

Global Id:	T0603790019
Status:	Completed - Case Closed
Status Date:	02/24/2012
Global Id:	T0603790019
Status:	Open - Case Begin Date
Status Date:	05/29/1987
Global Id:	T0603790019
Status:	Open - Remediation
Status Date:	03/23/2007
Global Id:	T0603790019
Status:	Open - Remediation
Status Date:	11/19/2007
Global Id:	T0603790019
Status:	Open - Remediation
Status Date:	03/17/2008
Global Id:	T0603790019
Status:	Open - Remediation
Status Date:	10/12/2011
Global Id:	T0603790019
Status:	Open - Site Assessment
Status Date:	02/04/2001
Global Id:	T0603790019
Status:	Open - Site Assessment
Status Date:	04/15/2002
Global Id:	T0603790019
Status:	Open - Site Assessment
Status Date:	10/01/2003
Global Id:	T0603790019
Status:	Open - Site Assessment
Status Date:	05/03/2010

Regulatory Activities:

Global Id:	T0603790019
Action Type:	Other
Date:	05/29/1987
Action:	Leak Stopped
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	11/14/2008
Action:	Clean Up Fund - 5-Year Review Summary
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	01/15/2011
Action:	Monitoring Report - Semi-Annually

RESEDA DODGE (Continued) **S101618441**

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/20/2009
Action: Well Installation Workplan

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2005
Action: Other Report / Document

Global Id: T0603790019
Action Type: REMEDIATION
Date: 01/01/2011
Action: Soil Vapor Extraction (SVE)

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/26/2011
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603790019
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 03/21/2007
Action: Soil and Water Investigation Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2006
Action: Remedial Progress Report

Global Id: T0603790019
Action Type: RESPONSE

RESEDA DODGE (Continued) **S101618441**

Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/31/2002
Action: Soil and Water Investigation Workplan

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 01/25/2008
Action: Staff Letter

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 07/11/2001
Action: Staff Letter

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 06/24/2010
Action: Site Visit / Inspection / Sampling

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 10/25/2011
Action: Staff Letter

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2012
Action: Monitoring Report - Semi-Annually

RESEDA DODGE (Continued) **S101618441**

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2012
Action: Remedial Progress Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 12/12/2002
Action: Soil and Water Investigation Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: Other
Date: 02/04/2001
Action: Leak Reported

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/23/2012
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 05/03/2010
Action: Staff Letter

Global Id: T0603790019
Action Type: Other

RESEDA DODGE (Continued) **S101618441**

Date:	05/29/1987
Action:	Leak Discovery
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	01/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	07/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Remedial Progress Report
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	04/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	11/25/2008
Action:	Well Installation Report
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	11/19/2007
Action:	Corrective Action Plan / Remedial Action Plan
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	10/01/2003
Action:	CAP/RAP - Feasibility Study Report
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	10/01/2003
Action:	Soil and Water Investigation Workplan
Global Id:	T0603790019
Action Type:	REMEDIATION
Date:	06/01/1987
Action:	Excavation
Global Id:	T0603790019
Action Type:	RESPONSE
Date:	01/15/2008
Action:	Monitoring Report - Quarterly
Global Id:	T0603790019
Action Type:	ENFORCEMENT
Date:	06/15/2009
Action:	Staff Letter

RESEDA DODGE (Continued) **S101618441**

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 02/24/2012
Action: Closure/No Further Action Letter

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 02/24/2012
Action: Closure/No Further Action Letter

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 09/13/2005
Action: Staff Letter

Global Id: T0603790019
Action Type: RESPONSE
Date: 01/20/2009
Action: Interim Remedial Action Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: ENFORCEMENT
Date: 10/12/2011
Action: Staff Letter

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/17/2008
Action: Well Installation Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: RESPONSE
Date: 04/15/2007
Action: Well Installation Report

Global Id: T0603790019
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603790019
Action Type: REMEDIATION

RESEDA DODGE (Continued) **S101618441**

Date: 10/01/2008
Action: Excavation

Global Id: T0603790019
Action Type: RESPONSE
Date: 08/03/2010
Action: Soil and Water Investigation Report

SWEEPS UST:
Status: Not reported
Comp Number: 533
Number: Not reported
Board Of Equalization: 44-011254
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 19-050-000533-000001
Tank Status: Not reported
Capacity: 260
Active Date: Not reported
Tank Use: OIL
STG: WASTE
Content: WASTE OIL
Number Of Tanks: 2

Status: Not reported
Comp Number: 533
Number: Not reported
Board Of Equalization: 44-011254
Referral Date: Not reported
Action Date: Not reported
Created Date: Not reported
Owner Tank Id: Not reported
SWRCB Tank Id: 19-050-000533-000002
Tank Status: Not reported
Capacity: 3000
Active Date: Not reported
Tank Use: M.V. FUEL
STG: PRODUCT
Content: REG UNLEADED
Number Of Tanks: Not reported

CA FID UST:
Facility ID: 19023970
Regulated By: UTNKI
Regulated ID: 00005179
Cortese Code: Not reported
SIC Code: Not reported
Facility Phone: 2130000000
Mail To: Not reported
Mailing Address: 6625 RESEDA BLVD
Mailing Address 2: Not reported
Mailing City,St,Zip: RESEDA 913350000
Contact: Not reported

RESEDA DODGE (Continued) **S101618441**

Contact Phone:	Not reported
DUNs Number:	Not reported
NPDES Number:	Not reported
EPA ID:	Not reported
Comments:	Not reported
Status:	Inactive

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	15659
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	15659
Air District Name:	SC
SIC Code:	5511
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

G23 **South** **1/4-1/2** **0.446 mi.** **2355 ft.**	**RESEDA DIST MAINTENANCE YARD** **6015 BAIRD AVE** **TARZANA, CA 91356** **Site 1 of 2 in cluster G**	**LUST** **HIST CORTESE**	**S102435798** **N/A**

Relative:
Higher

Actual:
757 ft.

LUST:

Region:	STATE
Global Id:	T0603702346
Latitude:	34.1788461
Longitude:	-118.5374567
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	11/14/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)

RESEDA DIST MAINTENANCE YARD (Continued) **S102435798**

Case Worker: YR
Local Agency: LOS ANGELES, CITY OF
RB Case Number: 913560016
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603702346
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

Global Id: T0603702346
Contact Type: Local Agency Caseworker
Contact Name: ELOY LUNA
Organization Name: LOS ANGELES, CITY OF
Address: 200 North Main Street, Suite 1780
City: LOS ANGELES
Email: eloy.luna@lacity.org
Phone Number: Not reported

Status History:
Global Id: T0603702346
Status: Completed - Case Closed
Status Date: 11/14/1996

Global Id: T0603702346
Status: Open - Case Begin Date
Status Date: 01/03/1984

Global Id: T0603702346
Status: Open - Site Assessment
Status Date: 04/18/1988

Regulatory Activities:
Global Id: T0603702346
Action Type: Other
Date: 01/03/1984
Action: Leak Reported

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 913560016
Status: Case Closed

RESEDA DIST MAINTENANCE YARD (Continued) **S102435798**

Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0603702346
W Global ID: Not reported
Staff: UNK
Local Agency: 19050
Cross Street: Not reported
Enforcement Type: Not reported
Date Leak Discovered: Not reported
Date Leak First Reported: 1/3/1984
Date Leak Record Entered: 12/31/1986
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 10/30/1996
Date the Case was Closed: 11/14/1996
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 7779.915886357111431835159327
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: 4/18/1988
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: STRUCTURAL & GEOTECHNICAL ENG.
RP Address: 650 S SPRING ST, SUITE 600, LOS ANGELES CA 90014-1915
Program: LUST
Lat/Long: 34.1789231 / -1
Local Agency Staff: PEJ
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: LDP INADEQUATE. REVISED PLAN REQUESTED. CASE REFERRED BACK TO LA CITY FOR LEAK DETECTION.

HIST CORTESE:
Region: CORTESE

RESEDA DIST MAINTENANCE YARD (Continued) **S102435798**

Facility County Code: 19
Reg By: LTNKA
Reg Id: 913560016

G24
South
1/4-1/2
0.447 mi.
2362 ft.

RESEDA/WOODLAMD HILLS ST. MAINT. D.YARD
6015 BAIRD AVENUE
RESEDA (IN LOS ANGELES), CA

SWF/LF **S105075657**
N/A

Site 2 of 2 in cluster G

Relative:
Higher

Actual:
756 ft.

SWF/LF (SWIS):
Region: STATE
Facility ID: 19-AR-1215
Lat/Long: 34.1792000 / -118.53789
Owner Name: City of Los Angeles, Bureau of St. Serv.
Owner Telephone: 2134855681
Owner Address: Not reported
Owner Address2: 600 South Spring Street, Suite 1200
Owner City,St,Zip: Los Angeles, CA 90014
Operational Status: Active
Operator: City of Los Angeles, Bureau of St. Serv.
Operator Phone: 2134856454
Operator Address: Not reported
Operator Address2: 600 South Spring Street, Suite 1200
Operator City,St,Zip: Los Angeles, CA 90014
Permit Date: 07/13/2001
Permit Status: Notification
Permitted Acreage: Not reported
Activity: Limited Volume Transfer Operation
Regulation Status: Notification
Landuse Name: Not reported
GIS Source: Map
Category: Transfer/Processing
Unit Number: 01
Inspection Frequency: Quarterly
Accepted Waste: Construction/demolition,Inert,Mixed municipal
Closure Date: Not reported
Closure Type: Not reported
Disposal Acreage: Not reported
SWIS Num: 19-AR-1215
Waste Discharge Requirement Num: Not reported
Program Type: Not reported
Permitted Throughput with Units: 60
Actual Throughput with Units: Cu Yards/day
Permitted Capacity with Units: 15000
Remaining Capacity: Not reported
Remaining Capacity with Units: Cu Yards/year
Lat/Long: 34.1792000 / -118.53789

25
SE
1/4-1/2
0.450 mi.
2378 ft.

PARKING AREA
18408 OXNARD ST
TARZANA, CA 91356

LUST **S113001267**
HAZNET **N/A**

Relative:
Higher

Actual:
748 ft.

LUST:
Region: STATE
Global Id: T10000005383
Latitude: 34.180977
Longitude: -118.532309
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 03/13/1996
Lead Agency: SWRCB
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: Not reported
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Status History:
Global Id: T10000005383
Status: Completed - Case Closed
Status Date: 03/13/1996

Global Id: T10000005383
Status: Open - Case Begin Date
Status Date: 06/14/1993

Global Id: T10000005383
Status: Open - Site Assessment
Status Date: 06/29/1993

Regulatory Activities:
Global Id: T10000005383
Action Type: Other
Date: 06/14/1993
Action: Leak Began

Global Id: T10000005383
Action Type: Other
Date: 06/29/1993
Action: Leak Reported

Global Id: T10000005383
Action Type: Other
Date: 06/14/1993
Action: Leak Discovery

HAZNET:
envid: S113001267
Year: 2006

PARKING AREA (Continued) **S113001267**

GEPAID: CAD062063375
Contact: WALTER PROBENO SINGH
Telephone: 818736035
Mailing Name: Not reported
Mailing Address: 8401 FALLBROOK AVE
Mailing City,St,Zip: WEST HILLS, CA 913043226
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.75
Cat Decode: Unspecified solvent mixture
Method Decode: Recycler
Facility County: Los Angeles

envid: S113001267
Year: 2006
GEPAID: CAD062063375
Contact: WALTER PROBENO SINGH
Telephone: 818736035
Mailing Name: Not reported
Mailing Address: 8401 FALLBROOK AVE
Mailing City,St,Zip: WEST HILLS, CA 913043226
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.75
Cat Decode: Unspecified solvent mixture
Method Decode: Recycler
Facility County: Los Angeles

envid: S113001267
Year: 2006
GEPAID: CAD062063375
Contact: WALTER PROBENO SINGH
Telephone: 818736035
Mailing Name: Not reported
Mailing Address: 8401 FALLBROOK AVE
Mailing City,St,Zip: WEST HILLS, CA 913043226
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.83
Cat Decode: Unspecified solvent mixture
Method Decode: Recycler
Facility County: Los Angeles

envid: S113001267
Year: 2006
GEPAID: CAD062063375
Contact: WALTER PROBENO SINGH
Telephone: 818736035

PARKING AREA (Continued) **S113001267**

Mailing Name: Not reported
Mailing Address: 8401 FALLBROOK AVE
Mailing City,St,Zip: WEST HILLS, CA 913043226
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.83
Cat Decode: Unspecified solvent mixture
Method Decode: Recycler
Facility County: Los Angeles

envid: S113001267
Year: 2006
GEPAID: CAD062063375
Contact: WALTER PROBENO SINGH
Telephone: 818736035
Mailing Name: Not reported
Mailing Address: 8401 FALLBROOK AVE
Mailing City,St,Zip: WEST HILLS, CA 913043226
Gen County: Not reported
TSD EPA ID: CAD008252405
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.83
Cat Decode: Unspecified solvent mixture
Method Decode: Recycler
Facility County: Los Angeles

Click this hyperlink while viewing on your computer to access
790 additional CA_HAZNET: record(s) in the EDR Site Report.

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26 **7027 CANBY AVENUE** **ENVIROSTOR** **S103697017**
NNE **7027 CANBY AVE.** **SLIC** **N/A**
1/2-1 **RESEDA, CA 91335** **LA Co. Site Mitigation**
0.923 mi.
4875 ft.

Relative:
Higher

Actual:
737 ft.

ENVIROSTOR:
Facility ID: 19281225
Status: Inactive - Action Required
Status Date: 06/26/2003
Site Code: Not reported
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 0.5
NPL: NO
Regulatory Agencies: US EPA
Lead Agency: US EPA
Program Manager: Not reported
Supervisor: Rita Kamat
Division Branch: Cleanup Chatsworth
Assembly: 45
Senate: 27
Special Program: EPA - PASI
Restricted Use: NO

7027 CANBY AVENUE (Continued) **S103697017**

Site Mgmt Req: NONE SPECIFIED
Funding: EPA Grant
Latitude: 34.1982
Longitude: -118.5357
APN: NONE SPECIFIED
Past Use: MAINTENANCE / CLEANING
Potential COC: * HALOGENATED SOLVENTS
Confirmed COC: NONE SPECIFIED
Potential Description: OTH, SOIL, SV
Alias Name: 301118
Alias Type: Not reported
Alias Name: 19281225
Alias Type: Envirostor ID Number

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 06/26/2003
Comments: PA is complete. Solvent contamination in GW exists. RR.

Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SLIC:
Region: STATE
Facility Status: **Open - Inactive**
Status Date: 01/01/1965
Global Id: SLT43196194
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 34.198231
Longitude: -118.53475
Case Type: Cleanup Program Site
Case Worker: LAC
Local Agency: Not reported
RB Case Number: 0298
File Location: Not reported
Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

SLIC REG 4:
Region: 4
Facility Status: Not reported
SLIC: 0298
Substance: Not reported
Staff: Los Angeles County Fire Department

7027 CANBY AVENUE (Continued) **S103697017**

LA Co. Site Mitigation:

Facility ID:	Not reported
Site ID:	SD0010558
Jurisdiction:	County
Case ID:	RO0000517
Abated:	Yes
Assigned To:	Don Thompson
Entered Date:	05/11/2004

Count: 3 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
RESEDA	S103281761	THRIFTY #133/ARCO #9584	8606 RESEDA BLVD	91335	LUST
RESEDA	1003879493	LOEHMANN’S PLAZA	VICTORY & TAMPA BLVDS.	91335	SEMS-ARCHIVE
VAN NUYS	S106387134	MTA - BURBANK BRANCH LINE B-15C	BESSEMER		SLIC

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/30/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/30/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/30/2015	Source: EPA
Date Data Arrived at EDR: 11/07/2015	Telephone: N/A
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 04/05/2016
Number of Days to Update: 58	Next Scheduled EDR Contact: 04/18/2016
	Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 04/08/2015	Telephone: 703-603-8704
Date Made Active in Reports: 06/11/2015	Last EDR Contact: 04/08/2016
Number of Days to Update: 64	Next Scheduled EDR Contact: 07/18/2016
	Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA’s Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/11/2016	Source: EPA
Date Data Arrived at EDR: 01/22/2016	Telephone: 800-424-9346
Date Made Active in Reports: 03/18/2016	Last EDR Contact: 04/05/2016
Number of Days to Update: 56	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/18/2016
Number of Days to Update: 56

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/02/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 04/05/2016	Last EDR Contact: 03/30/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/02/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 04/05/2016	Last EDR Contact: 03/30/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015	Source: Department of the Navy
Date Data Arrived at EDR: 05/29/2015	Telephone: 843-820-7326
Date Made Active in Reports: 06/11/2015	Last EDR Contact: 02/16/2016
Number of Days to Update: 13	Next Scheduled EDR Contact: 05/30/2016
	Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/10/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/11/2015	Telephone: 703-603-0695
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 02/29/2016
Number of Days to Update: 53	Next Scheduled EDR Contact: 06/13/2016
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/10/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/11/2015	Telephone: 703-603-0695
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 02/29/2016
Number of Days to Update: 53	Next Scheduled EDR Contact: 06/13/2016
	Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/22/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control’s (DTSC’s) Site Mitigation and Brownfields Reuse Program’s (SMBRP’s) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/15/2016
Date Data Arrived at EDR: 02/17/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 44

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/17/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST: Geotracker’s Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board’s LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015
Date Data Arrived at EDR: 01/08/2015
Date Made Active in Reports: 02/09/2015
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/27/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/28/2015
Date Made Active in Reports: 06/22/2015
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/20/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 111

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 34

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 12/14/2015	Source: SWRCB
Date Data Arrived at EDR: 12/14/2015	Telephone: 916-341-5851
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 03/16/2016
Number of Days to Update: 56	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2009	Telephone: 916-327-5092
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 03/11/2016
Number of Days to Update: 21	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014	Source: EPA Region 9
Date Data Arrived at EDR: 02/13/2015	Telephone: 415-972-3368
Date Made Active in Reports: 03/13/2015	Last EDR Contact: 01/27/2016
Number of Days to Update: 28	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Quarterly

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/13/2015	Source: EPA Region 8
Date Data Arrived at EDR: 10/23/2015	Telephone: 303-312-6137
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 118	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014	Source: EPA Region 7
Date Data Arrived at EDR: 11/25/2014	Telephone: 913-551-7003
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 01/25/2016
Number of Days to Update: 65	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/20/2015	Source: EPA Region 6
Date Data Arrived at EDR: 10/30/2015	Telephone: 214-665-7591
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 111	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 34

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC’s costs.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/01/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing

A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 12/04/2015
Date Data Arrived at EDR: 12/08/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 44

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015
Date Data Arrived at EDR: 12/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/22/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 02/08/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/23/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 58

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/14/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/01/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/03/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 09/30/2015
Date Data Arrived at EDR: 01/19/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 63

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/01/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990’s. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 11/25/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 16

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 12/17/2015
Date Data Arrived at EDR: 12/22/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 48

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 12/07/2015	Source: DTSC and SWRCB
Date Data Arrived at EDR: 12/08/2015	Telephone: 916-323-3400
Date Made Active in Reports: 01/21/2016	Last EDR Contact: 03/08/2016
Number of Days to Update: 44	Next Scheduled EDR Contact: 06/20/2016
	Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/26/2015	Telephone: 202-366-4555
Date Made Active in Reports: 09/02/2015	Last EDR Contact: 03/30/2016
Number of Days to Update: 68	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/16/2015	Source: Office of Emergency Services
Date Data Arrived at EDR: 01/27/2016	Telephone: 916-845-8400
Date Made Active in Reports: 03/22/2016	Last EDR Contact: 01/27/2016
Number of Days to Update: 55	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 12/14/2015	Source: State Water Qualilty Control Board
Date Data Arrived at EDR: 12/14/2015	Telephone: 866-480-1028
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 03/16/2016
Number of Days to Update: 56	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 12/14/2015	Source: State Water Resources Control Board
Date Data Arrived at EDR: 12/14/2015	Telephone: 866-480-1028
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 03/16/2016
Number of Days to Update: 56	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/02/2016	Telephone: (415) 495-8895
Date Made Active in Reports: 04/05/2016	Last EDR Contact: 03/30/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Varies

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 07/08/2015	Telephone: 202-528-4285
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 03/11/2016
Number of Days to Update: 97	Next Scheduled EDR Contact: 06/20/2016
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/15/2016
Number of Days to Update: 62	Next Scheduled EDR Contact: 04/25/2016
	Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/15/2016
Number of Days to Update: 339	Next Scheduled EDR Contact: 04/25/2016
	Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015
Date Data Arrived at EDR: 09/03/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/12/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015
Date Data Arrived at EDR: 08/26/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 10/17/2014	Telephone: 202-564-6023
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 02/12/2016
Number of Days to Update: 3	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014	Source: EPA
Date Data Arrived at EDR: 10/15/2014	Telephone: 202-566-0500
Date Made Active in Reports: 11/17/2014	Last EDR Contact: 04/12/2016
Number of Days to Update: 33	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/06/2015	Telephone: 202-564-5088
Date Made Active in Reports: 03/09/2015	Last EDR Contact: 04/08/2016
Number of Days to Update: 31	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/22/2016
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: 202-566-1667
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/22/2016
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/26/2015	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 07/10/2015	Telephone: 301-415-7169
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 02/08/2016
Number of Days to Update: 95	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 01/13/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/29/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/09/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2007	Telephone: 202-564-2501
Date Made Active in Reports: 04/10/2007	Last EDR Contact: 12/17/2008
Number of Days to Update: 40	Next Scheduled EDR Contact: 03/17/2008
	Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012	Source: Department of Transporation, Office of Pipeline Safety
Date Data Arrived at EDR: 08/07/2012	Telephone: 202-366-4595
Date Made Active in Reports: 09/18/2012	Last EDR Contact: 02/03/2016
Number of Days to Update: 42	Next Scheduled EDR Contact: 05/16/2016
	Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 04/17/2015	Telephone: Varies
Date Made Active in Reports: 06/02/2015	Last EDR Contact: 03/24/2016
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2013	Source: EPA/NTIS
Date Data Arrived at EDR: 02/24/2015	Telephone: 800-424-9346
Date Made Active in Reports: 09/30/2015	Last EDR Contact: 02/26/2016
Number of Days to Update: 218	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 12/08/2006	Telephone: 202-208-3710
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 01/15/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 04/25/2016
	Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 11/23/2015	Source: Department of Energy
Date Data Arrived at EDR: 11/24/2015	Telephone: 202-586-3559
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 02/08/2016
Number of Days to Update: 86	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/07/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2015
Date Data Arrived at EDR: 09/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 125

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/02/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/04/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/04/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and ’pointers’ to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015
Date Data Arrived at EDR: 09/09/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 12/29/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 23

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner’s agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 02/08/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/05/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 09/25/2015
Date Made Active in Reports: 11/05/2015
Number of Days to Update: 41

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/22/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 01/26/2016
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/28/2016
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 02/17/2016
Date Data Arrived at EDR: 02/23/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 38

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 10/14/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 58

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/11/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Annually

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/13/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 40

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing

A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/16/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 11/10/2015
Date Data Arrived at EDR: 12/08/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 44

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 02/16/2016
Date Data Arrived at EDR: 02/17/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 44

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 02/17/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing

A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 12/07/2015
Date Data Arrived at EDR: 12/08/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 44

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/08/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/14/2015	Source: Department of Conservation
Date Data Arrived at EDR: 12/17/2015	Telephone: 916-323-3836
Date Made Active in Reports: 03/01/2016	Last EDR Contact: 03/16/2016
Number of Days to Update: 75	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 09/10/2015	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/05/2016	Telephone: 916-445-3846
Date Made Active in Reports: 02/12/2016	Last EDR Contact: 04/04/2016
Number of Days to Update: 38	Next Scheduled EDR Contact: 07/04/2016
	Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 07/23/2015	Source: Deaprtment of Conservation
Date Data Arrived at EDR: 09/15/2015	Telephone: 916-445-2408
Date Made Active in Reports: 10/13/2015	Last EDR Contact: 03/16/2016
Number of Days to Update: 28	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015	Source: RWQCB, Central Valley Region
Date Data Arrived at EDR: 04/17/2015	Telephone: 559-445-5577
Date Made Active in Reports: 06/23/2015	Last EDR Contact: 01/15/2016
Number of Days to Update: 67	Next Scheduled EDR Contact: 04/25/2016
	Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 02/19/2016
Number of Days to Update: 9	Next Scheduled EDR Contact: 06/16/2016
	Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 03/28/2016
Number of Days to Update: 13	Next Scheduled EDR Contact: 07/11/2016
	Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Date Data Arrived at EDR: 09/23/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 103

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/23/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 11/23/2015
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 86

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/24/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR’s researchers. Manufactured gas sites were used in the United States from the 1800’s to 1950’s to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR’s HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR’s review was limited to those categories of sources that might, in EDR’s opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR’s HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/11/2016	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 01/12/2016	Telephone: 510-567-6700
Date Made Active in Reports: 02/22/2016	Last EDR Contact: 04/11/2016
Number of Days to Update: 41	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/11/2016	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 01/14/2016	Telephone: 510-567-6700
Date Made Active in Reports: 03/01/2016	Last EDR Contact: 04/11/2016
Number of Days to Update: 47	Next Scheduled EDR Contact: 07/25/2016
	Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List
Cupa Facility List

Date of Government Version: 11/16/2015
Date Data Arrived at EDR: 12/10/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 42

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing
Cupa facility list.

Date of Government Version: 02/19/2016
Date Data Arrived at EDR: 02/23/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 38

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 02/02/2016
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 18

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 02/24/2016
Date Data Arrived at EDR: 02/26/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 35

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 01/22/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 03/07/2016
Number of Days to Update: 31

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 37

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA’s are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/05/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 45

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 12/02/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 48

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/25/2016
Date Data Arrived at EDR: 01/27/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 26

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 09/10/2013	Source: Inyo County Environmental Health Services
Date Data Arrived at EDR: 09/11/2013	Telephone: 760-878-0238
Date Made Active in Reports: 10/14/2013	Last EDR Contact: 02/22/2016
Number of Days to Update: 33	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 05/19/2015	Source: Kern County Environment Health Services Department
Date Data Arrived at EDR: 06/18/2015	Telephone: 661-862-8700
Date Made Active in Reports: 07/22/2015	Last EDR Contact: 02/22/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/23/2016	Source: Kings County Department of Public Health
Date Data Arrived at EDR: 02/25/2016	Telephone: 559-584-1411
Date Made Active in Reports: 04/01/2016	Last EDR Contact: 02/22/2016
Number of Days to Update: 36	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/09/2016	Source: Lake County Environmental Health
Date Data Arrived at EDR: 02/12/2016	Telephone: 707-263-1164
Date Made Active in Reports: 04/01/2016	Last EDR Contact: 01/19/2016
Number of Days to Update: 49	Next Scheduled EDR Contact: 05/02/2016
	Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009	Source: EPA Region 9
Date Data Arrived at EDR: 03/31/2009	Telephone: 415-972-3178
Date Made Active in Reports: 10/23/2009	Last EDR Contact: 03/21/2016
Number of Days to Update: 206	Next Scheduled EDR Contact: 07/04/2016
	Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 11/24/2014
Date Data Arrived at EDR: 01/30/2015
Date Made Active in Reports: 03/04/2015
Number of Days to Update: 33

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/01/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/19/2016
Date Data Arrived at EDR: 01/20/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 62

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/20/2016
Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2016
Date Data Arrived at EDR: 01/26/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 56

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/19/2016
Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/15/2015
Date Data Arrived at EDR: 01/29/2015
Date Made Active in Reports: 03/10/2015
Number of Days to Update: 40

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 03/30/2015
Date Data Arrived at EDR: 04/02/2015
Date Made Active in Reports: 04/13/2015
Number of Days to Update: 11

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 11/04/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/12/2016
Date Data Arrived at EDR: 01/15/2016
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 24

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 01/11/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 12/11/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 03/07/2016
Number of Days to Update: 84

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 10/05/2015
Date Data Arrived at EDR: 10/08/2015
Date Made Active in Reports: 10/15/2015
Number of Days to Update: 7

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 12/14/2015
Date Data Arrived at EDR: 12/18/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 34

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 11/24/2015
Date Data Arrived at EDR: 12/01/2015
Date Made Active in Reports: 01/21/2016
Number of Days to Update: 51

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 12/10/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/12/2016
Number of Days to Update: 60

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/29/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 01/27/2016
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 18

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/10/2016
Date Made Active in Reports: 04/01/2016
Number of Days to Update: 51

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/10/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/09/2015	Source: Placer County Health and Human Services
Date Data Arrived at EDR: 12/11/2015	Telephone: 530-745-2363
Date Made Active in Reports: 01/21/2016	Last EDR Contact: 03/07/2016
Number of Days to Update: 41	Next Scheduled EDR Contact: 06/20/2016
	Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/20/2016	Source: Department of Environmental Health
Date Data Arrived at EDR: 01/22/2016	Telephone: 951-358-5055
Date Made Active in Reports: 03/22/2016	Last EDR Contact: 03/21/2016
Number of Days to Update: 60	Next Scheduled EDR Contact: 07/04/2016
	Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 01/20/2016	Source: Department of Environmental Health
Date Data Arrived at EDR: 01/22/2016	Telephone: 951-358-5055
Date Made Active in Reports: 03/22/2016	Last EDR Contact: 03/21/2016
Number of Days to Update: 60	Next Scheduled EDR Contact: 07/04/2016
	Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/02/2015	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 01/05/2016	Telephone: 916-875-8406
Date Made Active in Reports: 02/12/2016	Last EDR Contact: 04/06/2016
Number of Days to Update: 38	Next Scheduled EDR Contact: 07/18/2016
	Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 11/02/2015	Source: Sacramento County Environmental Management
Date Data Arrived at EDR: 01/05/2016	Telephone: 916-875-8406
Date Made Active in Reports: 02/12/2016	Last EDR Contact: 04/06/2016
Number of Days to Update: 38	Next Scheduled EDR Contact: 07/18/2016
	Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 12/14/2015	Source: San Bernardino County Fire Department Hazardous Materials Division
Date Data Arrived at EDR: 12/18/2015	Telephone: 909-387-3041
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 02/08/2016
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment ’H’ permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013	Source: Hazardous Materials Management Division
Date Data Arrived at EDR: 09/24/2013	Telephone: 619-338-2268
Date Made Active in Reports: 10/17/2013	Last EDR Contact: 03/07/2016
Number of Days to Update: 23	Next Scheduled EDR Contact: 06/20/2016
	Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015	Source: Department of Health Services
Date Data Arrived at EDR: 11/07/2015	Telephone: 619-338-2209
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 58	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010	Source: San Diego County Department of Environmental Health
Date Data Arrived at EDR: 06/15/2010	Telephone: 619-338-2371
Date Made Active in Reports: 07/09/2010	Last EDR Contact: 03/03/2016
Number of Days to Update: 24	Next Scheduled EDR Contact: 06/20/2016
	Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008	Source: Department Of Public Health San Francisco County
Date Data Arrived at EDR: 09/19/2008	Telephone: 415-252-3920
Date Made Active in Reports: 09/29/2008	Last EDR Contact: 02/08/2016
Number of Days to Update: 10	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010	Source: Department of Public Health
Date Data Arrived at EDR: 03/10/2011	Telephone: 415-252-3920
Date Made Active in Reports: 03/15/2011	Last EDR Contact: 02/08/2016
Number of Days to Update: 5	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/18/2015	Source: Environmental Health Department
Date Data Arrived at EDR: 12/22/2015	Telephone: N/A
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 04/04/2016
Number of Days to Update: 48	Next Scheduled EDR Contact: 07/04/2016
	Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 02/22/2016	Source: San Luis Obispo County Public Health Department
Date Data Arrived at EDR: 02/24/2016	Telephone: 805-781-5596
Date Made Active in Reports: 04/01/2016	Last EDR Contact: 02/22/2016
Number of Days to Update: 37	Next Scheduled EDR Contact: 06/21/2016
	Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 10/14/2015	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 10/15/2015	Telephone: 650-363-1921
Date Made Active in Reports: 11/16/2015	Last EDR Contact: 03/28/2016
Number of Days to Update: 32	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/14/2015	Source: San Mateo County Environmental Health Services Division
Date Data Arrived at EDR: 12/17/2015	Telephone: 650-363-1921
Date Made Active in Reports: 02/08/2016	Last EDR Contact: 03/14/2016
Number of Days to Update: 53	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011	Source: Santa Barbara County Public Health Department
Date Data Arrived at EDR: 09/09/2011	Telephone: 805-686-8167
Date Made Active in Reports: 10/07/2011	Last EDR Contact: 02/22/2016
Number of Days to Update: 28	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

Date of Government Version: 11/18/2015	Source: Department of Environmental Health
Date Data Arrived at EDR: 11/24/2015	Telephone: 408-918-1973
Date Made Active in Reports: 12/11/2015	Last EDR Contact: 02/22/2016
Number of Days to Update: 17	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005	Source: Santa Clara Valley Water District
Date Data Arrived at EDR: 03/30/2005	Telephone: 408-265-2600
Date Made Active in Reports: 04/21/2005	Last EDR Contact: 03/23/2009
Number of Days to Update: 22	Next Scheduled EDR Contact: 06/22/2009
	Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014	Source: Department of Environmental Health
Date Data Arrived at EDR: 03/05/2014	Telephone: 408-918-3417
Date Made Active in Reports: 03/18/2014	Last EDR Contact: 02/29/2016
Number of Days to Update: 13	Next Scheduled EDR Contact: 06/13/2016
	Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/05/2016	Source: City of San Jose Fire Department
Date Data Arrived at EDR: 02/10/2016	Telephone: 408-535-7694
Date Made Active in Reports: 04/01/2016	Last EDR Contact: 02/08/2016
Number of Days to Update: 51	Next Scheduled EDR Contact: 05/23/2016
	Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 11/18/2015	Source: Santa Cruz County Environmental Health
Date Data Arrived at EDR: 11/23/2015	Telephone: 831-464-2761
Date Made Active in Reports: 12/11/2015	Last EDR Contact: 02/22/2016
Number of Days to Update: 18	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 12/09/2015	Source: Shasta County Department of Resource Management
Date Data Arrived at EDR: 12/10/2015	Telephone: 530-225-5789
Date Made Active in Reports: 01/21/2016	Last EDR Contact: 02/22/2016
Number of Days to Update: 42	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 10/30/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 10/30/2015
Date Data Arrived at EDR: 12/14/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 56

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/14/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 39

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/05/2016
Date Data Arrived at EDR: 01/07/2016
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 32

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/28/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 12/07/2015
Date Data Arrived at EDR: 12/08/2015
Date Made Active in Reports: 12/17/2015
Number of Days to Update: 9

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 03/07/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 10/29/2015
Date Data Arrived at EDR: 10/30/2015
Date Made Active in Reports: 12/11/2015
Number of Days to Update: 42

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 03/04/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 02/14/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 12/28/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 53

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 11/30/2015
Date Data Arrived at EDR: 12/17/2015
Date Made Active in Reports: 02/08/2016
Number of Days to Update: 53

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/17/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 46

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 02/22/2016
Number of Days to Update: 17

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 02/01/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/18/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/17/2015
Date Made Active in Reports: 08/12/2015
Number of Days to Update: 26

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/03/2016
Next Scheduled EDR Contact: 05/16/2016
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/24/2015
Date Made Active in Reports: 08/18/2015
Number of Days to Update: 25

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/19/2016
Next Scheduled EDR Contact: 05/02/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2014	Source: Department of Natural Resources
Date Data Arrived at EDR: 03/19/2015	Telephone: N/A
Date Made Active in Reports: 04/07/2015	Last EDR Contact: 03/14/2016
Number of Days to Update: 19	Next Scheduled EDR Contact: 06/27/2016
	Data Release Frequency: Annually

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association’s annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics’ primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SHERMAN OAKS CENTER FOR ENRICHED STUDIES
18605 ERWIN STREET
RESEDA, CA 91335

TARGET PROPERTY COORDINATES

Latitude (North):	34.185246 - 34˚ 11’ 6.89’’
Longitude (West):	118.538617 - 118˚ 32’ 19.02’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	358211.7
UTM Y (Meters):	3783570.8
Elevation:	736 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5630737 CANOGA PARK, CA
Version Date:	2012

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

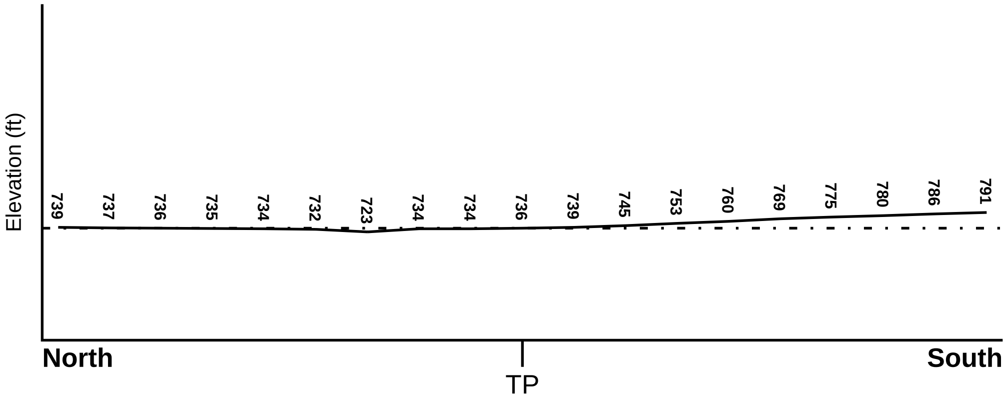
TOPOGRAPHIC INFORMATION

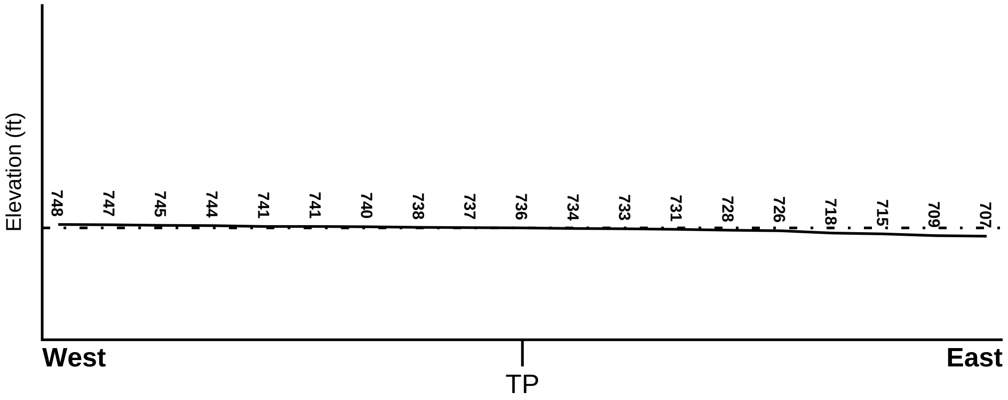
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

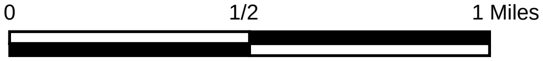
General Topographic Gradient: General NNE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 736 ft.



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
LOS ANGELES, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 06037C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CANOGA PARK	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
1	1/2 - 1 Mile South	Not Reported

For additional site information, refer to Physical Setting Source Map Findings.

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* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

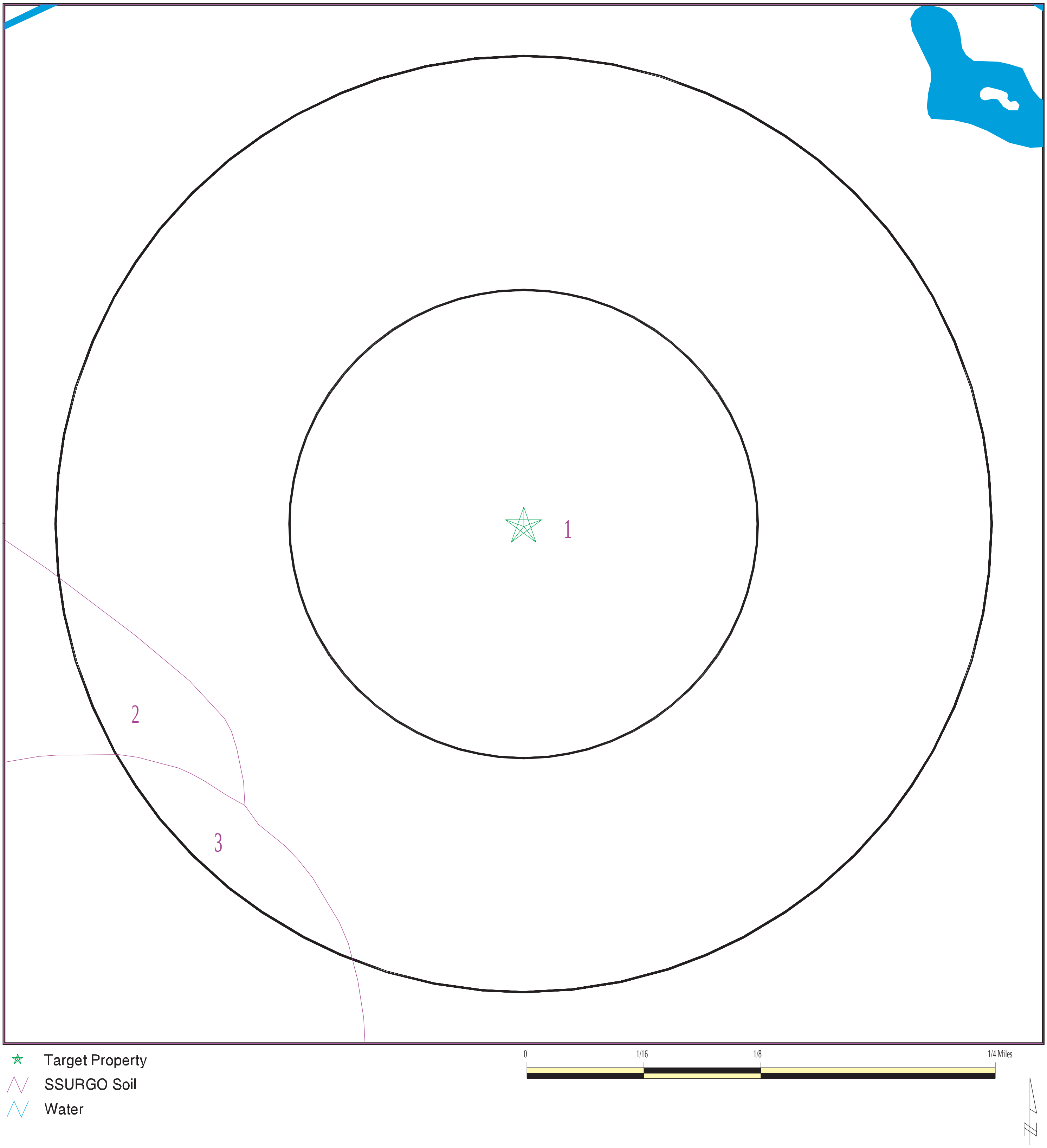
GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT		**GEOLOGIC AGE IDENTIFICATION**	
Era:	Cenozoic	Category:	Stratifed Sequence
System:	Quaternary		
Series:	Quaternary		
Code:	Q *(decoded above as Era, System & Series)*		

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4591788.2s



SITE NAME: Sherman Oaks Center For Enriched Studies
ADDRESS: 18605 Erwin Street
Reseda CA 91335
LAT/LONG: 34.185246 / 118.538617

CLIENT: Eco & Associates, Inc.
CONTACT: Quin Kinnebrew
INQUIRY #: 4591788.2s
DATE: April 13, 2016 8:05 pm

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	Mocho
Soil Surface Texture:	loam
Hydrologic Group:	Not reported
Soil Drainage Class:	

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		
1	0 inches	16 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	16 inches	75 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name:	Cropley
Soil Surface Texture:	clay
Hydrologic Group:	Not reported
Soil Drainage Class:	

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**		**Soil Reaction (pH)**
1	0 inches	35 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4
2	35 inches	64 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.4

Soil Map ID: 3

Soil Component Name: Danville

Soil Surface Texture: silty clay loam

Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**	**Saturated hydraulic conductivity micro m/sec**	**Soil Reaction (pH)**
1	0 inches	24 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4
2	24 inches	50 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 7.9
3	50 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

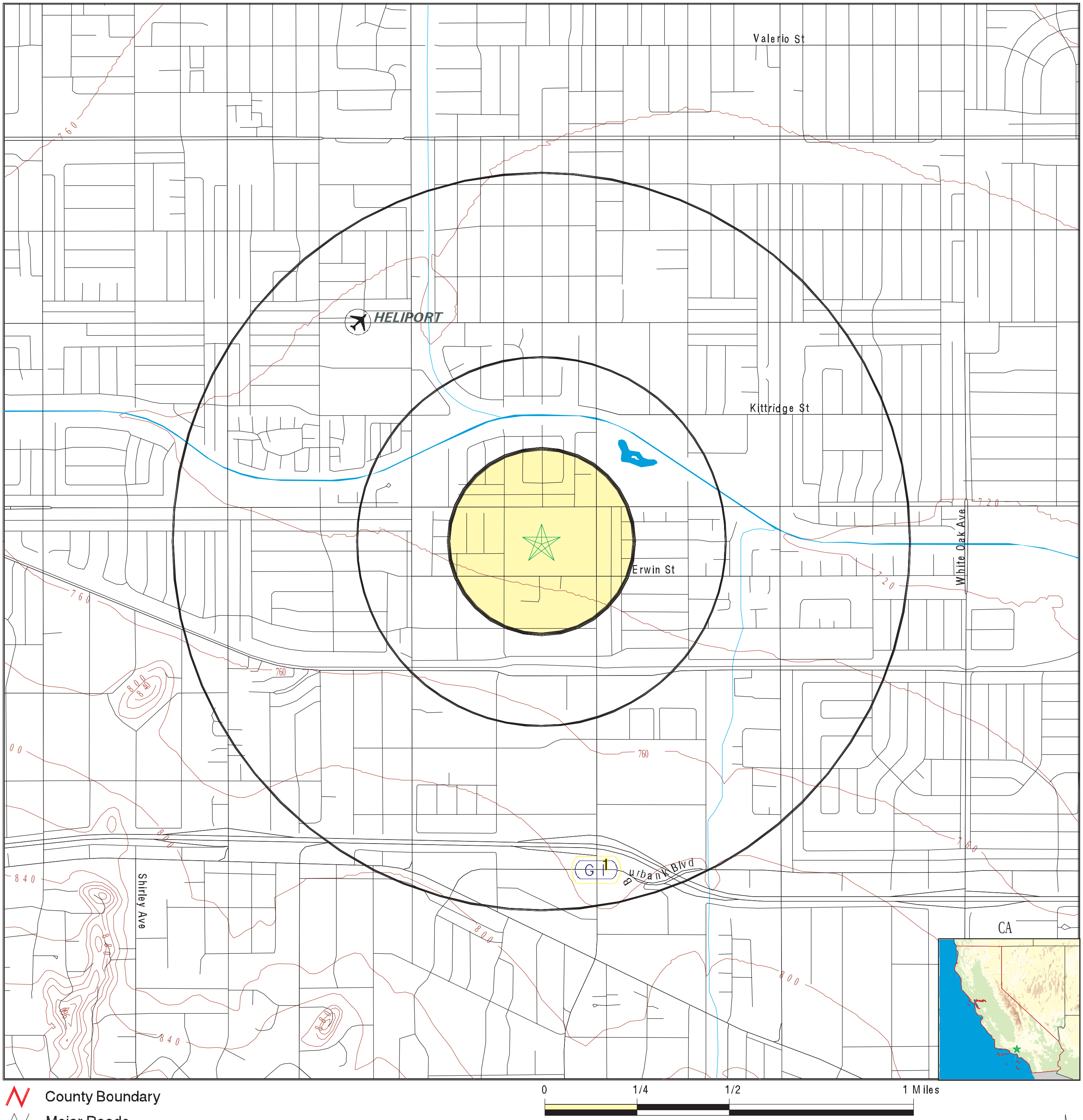
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 4591788.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Ⓦ Water Wells
Ⓟ Public Water Supply Wells
● Cluster of Multiple Icons

Groundwater Flow Direction
(G I) Indeterminate Groundwater Flow at Location
(G V) Groundwater Flow Varies at Location
(H D) Closest Hydrogeological Data
● Oil, gas or related wells

SITE NAME: Sherman Oaks Center For Enriched Studies
ADDRESS: 18605 Erwin Street
Reseda CA 91335
LAT/LONG: 34.185246 / 118.538617

CLIENT: Eco & Associates, Inc.
CONTACT: Quin Kinnebrew
INQUIRY #: 4591788.2s
DATE: April 13, 2016 8:04 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
1 **South** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	913560416 Not Reported 71 73 Not Reported 06/30/1987	**AQUIFLOW**	**69698**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
91335	138	24

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5’ Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5’ Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR’s Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California’s Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

APPENDIX D

AGENCY FILES – LOS ANGELES UNIFIED SCHOOL DISTRICT

APPENDIX D-1

LOS ANGELES COUNTY
DEPARTMENT OF PUBLIC WORKS

Department of Public Works
[illegible].lacounty.gov

Clean LA for Residents
Clean LA for Business
Clean LA for Government
Clean LA is for ALL Los Angeles County

- **Reduce, Reuse, Recycle**
- **Trash Collection / Illegal Dumping**
- **Household Hazardous Waste / Electronic Waste**
- **Used Motor Oil Recycling**
- **Industrial Waste**
- **Underground Storage Tanks**
- **Solid Waste**
- **Stormwater**
- **Water Conservation**
- **Youth Education**

Online File Review

Industrial Waste / Underground Storage Tanks / Stormwater

Back

You searched the following address:

Street Number: 18605 Street Name: Erwin

Our office does not have any records (related to industrial waste/underground storage tanks/stormwater) for the requested site address.

Please double check the spelling of the street name or search a different address. Both street number and street name must be exact and spelled correctly as they appear for the facility on file. Do not include street direction prefix (i.e. N, S, E, W, etc...) or suffix (i.e. ST, AVE, RD, BLVD, etc...) unless they appear in the street name (i.e. AVENUE K, AVENIDA CESAR CHAVEZ, 10TH ST EAST, CROSSROADS PKWY N, etc...). Do not include any extra spaces after the street number or after the street name.

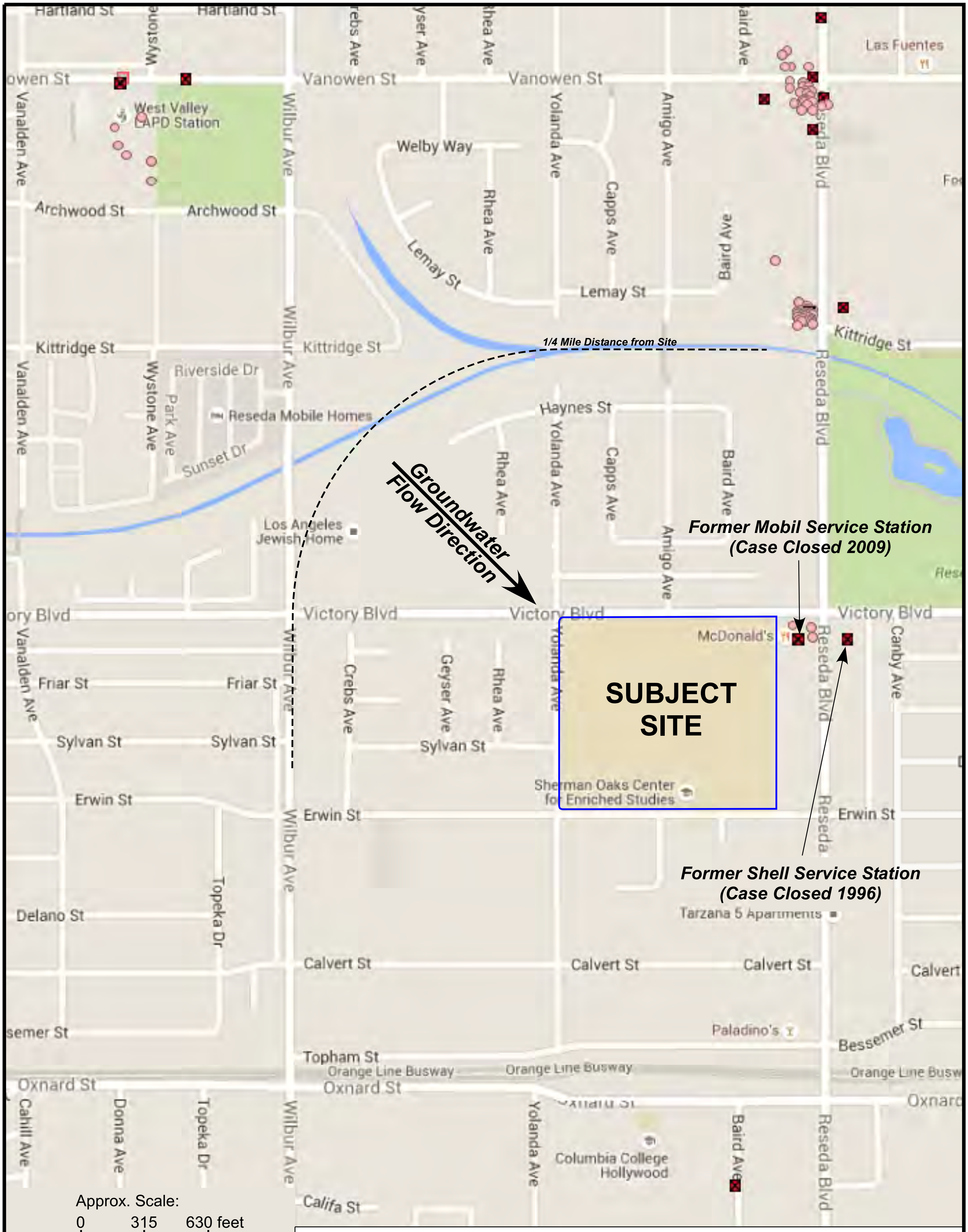
Back

Managed by the County of Los Angeles Department of Public Works, Environmental Programs Division
Toll Free Phone Number: 1(888) CLEAN LA
Clean LA Home | Clean LA FAQ | About Clean LA | Clean LA Site Index | Contact Clean LA

lacounty.gov | Public Works FAQ | Privacy & Security Policy | Accessibility | Terms of Use | Feedback | Follow Us

APPENDIX D-2

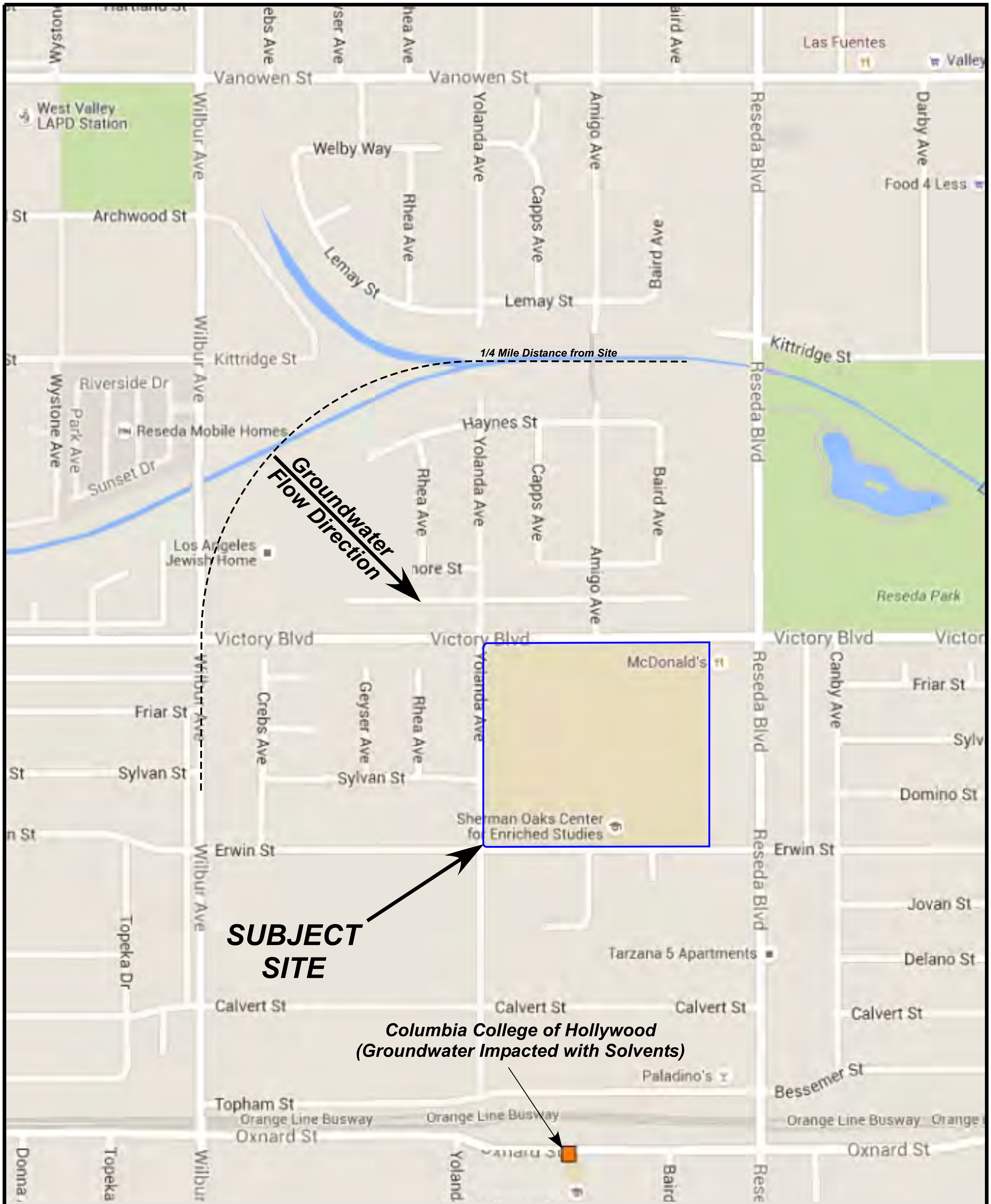
REGIONAL WATER QUALITY CONTROL BOARD



Source: Regional Water Quality Control Board (http://geotracker.waterboards.ca.gov/)

APPENDIX D-3

DEPARTMENT OF TOXIC SUBSTANCES CONTROL



Approx. Scale:
0 300 600 feet

No DTSC-Listed Properties within 1/4 Mile and Up-Gradient of Site

Source: Department of Toxic Substances Control (http://www.envirostor.dtsc.ca.gov/public//)

APPENDIX D-4

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

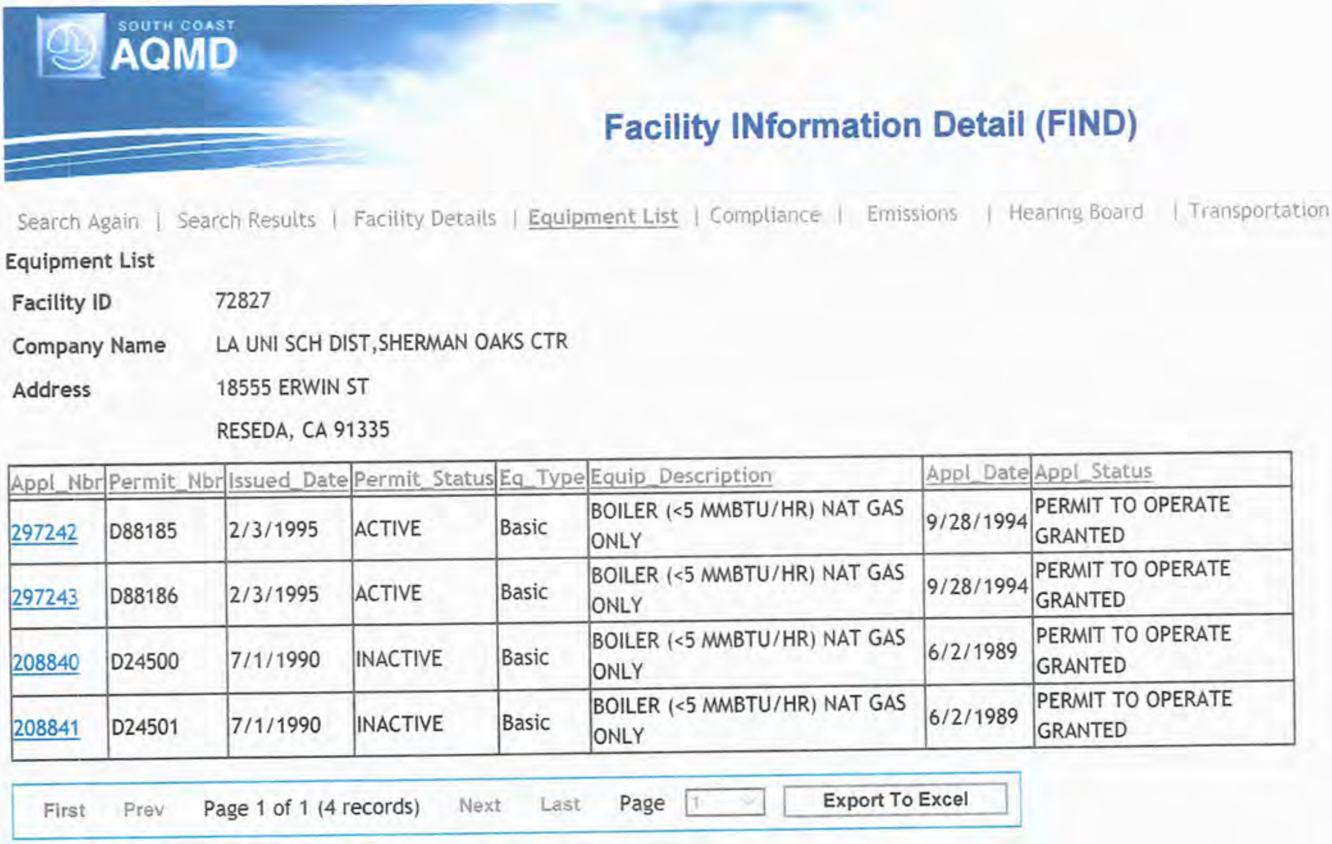
SOUTH COAST
AQMD

Facility INformation Detail (FIND)

Search Again

Facility ID	Facility Name	Facility Address	RECLAIM	Title V	Facility Status
72827	LA UNI SCH DIST,SHERMAN OAKS CTR	18555 ERWIN ST , RESEDA, CA 91335			ACTIVE
128868	LOS ANGELES UNIFIED SCHOOL DISTRICT	18605 ERWIN ST , RESEDA, CA 91335			ACTIVE
19616	SEQUOIA JR HI SCH	18605 ERWIN ST , RESEDA, CA 91335			ACTIVE

First Prev Page 1 of 1 (3 records) Next Last Page 1 Export To Excel



Facility INformation Detail (FIND)

Equipment List

Facility ID 72827

Company Name LA UNI SCH DIST,SHERMAN OAKS CTR

Address 18555 ERWIN ST
RESEDA, CA 91335

Appl_Nbr	Permit_Nbr	Issued_Date	Permit_Status	Eq_Type	Equip_Description	Appl_Date	Appl_Status
297242	D88185	2/3/1995	ACTIVE	Basic	BOILER (<5 MMBTU/HR) NAT GAS ONLY	9/28/1994	PERMIT TO OPERATE GRANTED
297243	D88186	2/3/1995	ACTIVE	Basic	BOILER (<5 MMBTU/HR) NAT GAS ONLY	9/28/1994	PERMIT TO OPERATE GRANTED
208840	D24500	7/1/1990	INACTIVE	Basic	BOILER (<5 MMBTU/HR) NAT GAS ONLY	6/2/1989	PERMIT TO OPERATE GRANTED
208841	D24501	7/1/1990	INACTIVE	Basic	BOILER (<5 MMBTU/HR) NAT GAS ONLY	6/2/1989	PERMIT TO OPERATE GRANTED

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

PERMIT TO CONSTRUCT/OPERATE

Permit No.
D88185
A/N 297242

This in[illegible] renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the b[illegible]able (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner or Operator: LA UNI SCH DIST,SHERMAN OAKS CTR
P O BOX 2298, BSC RM 303
LOS ANGELES, CA 90051

ID 072827

Equipment Location: 18555 ERWIN ST, RESEDA, CA 91335-6859

Equipment Description:

BOILER, BRYANT, SECTIONAL TYPE, MODEL NUMBER S 814, BOILER #1, 2.2 M BTU/HR, WITH FURIGAS BURNER. ALTERATION TO AN EXISTING BOILER, PERMIT NO. D24501, BY THE REPLACEMENT OF THE EXISTING BURNER WITH A FURIGAS LO-NOX BURNER

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS BOILER SHALL BE FIRED ON NATURAL GAS ONLY.

4. THE OPERATION OF THIS EQUIPMENT SHALL COMPLY WITH THE PROVISIONS OF RULE 1146.1.

5. UNLESS THE REQUIRED SOURCE TESTS HAVE BEEN CONDUCTED ON ONE OF THE FOUR IDENTICAL BOILERS (APPLICATION NOS. 287810,1,2,3) THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:

   A. A TEST PLAN SHALL BE SUBMITTED TO THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, SOIL REMEDIATION TEAM PRIOR TO INITIAL START-UP AND SHALL BE APPROVED BY THE TEAM MANAGER BEFORE THE TEST COMMENCES. THE PLAN SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST, THE IDENTITY OF THE TESTING LABORATORY,A STATEMENT FROM THE TESTING LABORATORY CERTIFYING IT MEETS THE CRITERIA IN DISTRICT RULE 304(k), AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

FILE COPY

B. EMISSION TESTING SHALL BE CONDUCTED WITHIN 60 DAYS OF APPROVAL OF THE TEST PLAN. A COMPLETE REPORT SHALL BE SUBMITTED TO THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, AND SOIL REMEDIATION TEAM WITHIN 45 DAYS OF COMPLETION OF THE TEST.

C. THE TESTS SHALL DETERMINE:

(1) THE NOX CONCENTRATION IN THE EXHAUST GASES IN PARTS PER MILLION BY VOLUME ON A DRY BASIS CORRECTED TO 3% OXYGEN.

(2) THE CO IN THE EXHAUST GASES IN PARTS PER MILLION BY VOLUME ON A DRY BASIS CORRECTED TO 3 % O2.

(3) OXYGEN CONTENT IN EXHAUST GASES, IN %.

(4) MOISTURE CONTENT OF EXHAUST GASES IN PER CENT.

(5) THE FUEL CONSUMPTION RATE, IN CUBIC FEET OF NATURAL GAS PER HOUR, DURING THE TESTING PERIOD(S)

D. THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, AND SOIL REMEDIATION TEAM SHALL BE NOTIFIED OF THE DATE AND TIME OF THE AT LEAST 10 DAYS PRIOR TO THE TEST, OR WITHIN A TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER.

E. SAMPLING FACILITIES SHALL COMPLY WITH THE ATTACHED DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING ACILITIES", PURSUANT TO RULE 217.

FILE COPY

PERMIT TO CONSTRUCT/OPERATE

CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

Dorris M Bailey

By Dorris M. Bailey/al
2/03/1995

FILE COPY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 East Copley Drive, Diamond Bar, CA 91765

PERMIT TO CONSTRUCT/OPERATE

Permit No.
D88186
A/N 297243
Page 1

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for annual renewal fee (Rule 301.l) is not received by the expiration date, contact the District.

Legal Owner or Operator:

LA UNI SCH DIST,SHERMAN OAKS CTR
P O BOX 2298, BSC RM 303
LOS ANGELES, CA 90051

ID 072827

Equipment Location: 18555 ERWIN ST, RESEDA, CA 91335-6859

Equipment Description:

BOILER, BRYANT, SECTIONAL TYPE, MODEL NUMBER S 814, BOILER #2, 2.2 M BTU/HR, WITH FURIGAS BURNER. ALTERATION TO AN EXISTING BOILER, PERMIT NO. D24500, BY THE REPLACEMENT OF THE EXISTING BURNER WITH A FURIGAS LO-NOX BURNER

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS BOILER SHALL BE FIRED ON NATURAL GAS ONLY.

4. THE OPERATION OF THIS EQUIPMENT SHALL COMPLY WITH THE PROVISIONS OF RULE 1146.1.

5. UNLESS THE REQUIRED SOURCE TESTS HAVE BEEN CONDUCTED ON ONE OF THE FOUR IDENTICAL BOILERS (APPLICATION NOS. 287810,1,2,3) THE OWNER OR OPERATOR OF THIS EQUIPMENT SHALL CONDUCT A SOURCE TEST UNDER THE FOLLOWING CONDITIONS:

   A. A TEST PLAN SHALL BE SUBMITTED TO THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, SOIL REMEDIATION TEAM PRIOR TO INITIAL START-UP AND SHALL BE APPROVED BY THE TEAM MANAGER BEFORE THE TEST COMMENCES. THE PLAN SHALL INCLUDE PROPOSED OPERATING CONDITIONS OF THE EQUIPMENT DURING THE TEST, THE IDENTITY OF THE TESTING LABORATORY,A STATEMENT FROM THE TESTING LABORATORY CERTIFYING IT MEETS THE CRITERIA IN DISTRICT RULE 304(k), AND A DESCRIPTION OF ALL SAMPLING AND ANALYTICAL PROCEDURES TO BE USED.

FILE COPY

CONTINUATION OF PERMIT TO CONSTRUCT/OPERATE

B. EMISSION TESTING SHALL BE CONDUCTED WITHIN 60 DAYS OF APPROVAL OF THE TEST PLAN. A COMPLETE REPORT SHALL BE SUBMITTED TO THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, AND SOIL REMEDIATION TEAM WITHIN 45 DAYS OF COMPLETION OF THE TEST.

C. THE TESTS SHALL DETERMINE:

(1) THE NOX CONCENTRATION IN THE EXHAUST GASES IN PARTS PER MILLION BY VOLUME ON A DRY BASIS CORRECTED TO 3% OXYGEN.

(2) THE CO IN THE EXHAUST GASES IN PARTS PER MILLION BY VOLUME ON A DRY BASIS CORRECTED TO 3 % O_2.

(3) OXYGEN CONTENT IN EXHAUST GASES, IN %.

(4) MOISTURE CONTENT OF EXHAUST GASES IN PER CENT.

(5) THE FUEL CONSUMPTION RATE, IN CUBIC FEET OF NATURAL GAS PER HOUR, DURING THE TESTING PERIOD(S)

D. THE SMALL ELECTRONICS, PETROLEUM, PUBLIC FACILITIES, AND SOIL REMEDIATION TEAM SHALL BE NOTIFIED OF THE DATE AND TIME OF THE AT LEAST 10 DAYS PRIOR TO THE TEST, OR WITHIN A TIME PERIOD AGREED UPON BY THE DISTRICT ENGINEER.

E. SAMPLING FACILITIES SHALL COMPLY WITH THE ATTACHED DISTRICT "GUIDELINES FOR CONSTRUCTION OF SAMPLING AND TESTING ACILITIES", PURSUANT TO RULE 217.

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY SHALL BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

Dorris M. Bailey

By Dorris M. Bailey/al
2/03/1995

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.
D24500
A/N 208840
Page 1

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner Or Operator: **ID 072827**

LOS ANGELES UNIFIED SCHOOL DISTRICT
1240 S. NAOMI AVE.
LOS ANGELES, CA 90021
ATTN: H.E. MENESES

Equipment located at:

18555 ERWIN ST.
RESEDA, CA 91355

Equipment Description:

BOILER, BRYANT, SECTIONAL TYPE, MODEL NUMBER 22W630E27E, SERIAL NUMBER ID#W-909, 2440000 BTU/HR, WITH 22 BRYANT GAS BURNERS.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.
2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.
3. THIS EQUIPMENT SHALL BE FIRED ON NATURAL GAS ONLY.

FILE COPY

CONTINUATION OF PERMIT TO OPERATE

NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR COPY MUST BE POSTED ON OR WITHIN 8 METERS OF THE EQUIPMENT.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT CANNOT BE CONSIDERED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF OTHER GOVERNMENT AGENCIES.

EXECUTIVE OFFICER

By Raquel Puerta/Creighton
June 18, 1990

FILE COPY

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PERMIT TO OPERATE

9150 FLAIR DRIVE, EL MONTE, CALIFORNIA 91731

Permit No.
D24501
A/N 208841
Page 1

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership. If the billing for annual renewal fee (Rule 301.f) is not received by the expiration date, contact the District.

Legal Owner Or Operator: ID 072827

LOS ANGELES UNIFIED SCHOOL DISTRICT
1240 S. NAOMI AVE.
LOS ANGELES, CA 90021
ATTN: H.E. MENESES

Equipment located at:

18555 ERWIN ST.
RESEDA, CA 91335

Equipment Description:

BOILER, BRYANT, SECTIONAL TYPE, MODEL NUMBER 2W630A11E, SERIAL NUMBER ID# W-908, 2440000 BTU/HR, WITH 22 BRYANT GAS BURNERS.

Conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN COMPLIANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

3. THIS EQUIPMENT SHALL BE FIRED ON NATURAL GAS ONLY.

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Permit No.
D24501
A/N 208841
Page 2

CONTINUATION OF PERMIT TO OPERATE

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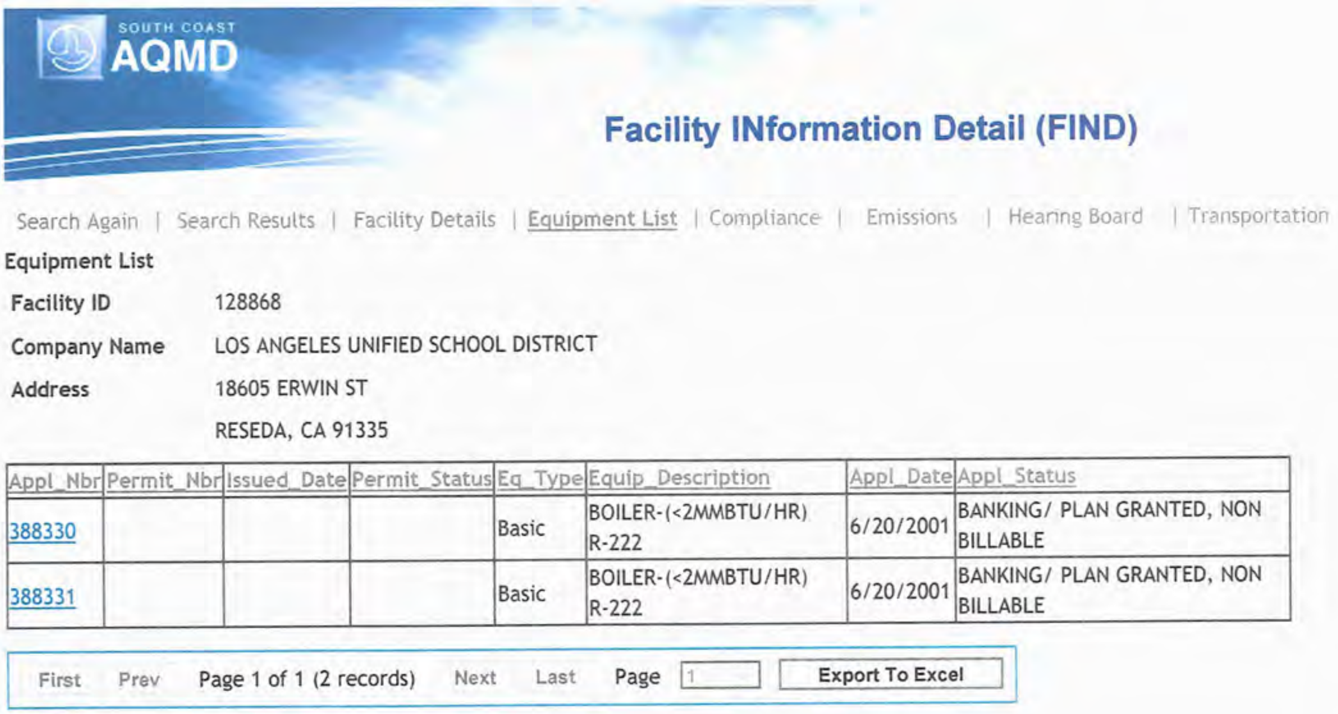
EXECUTIVE OFFICER

By Raquel Puerta/Creighton
June 18, 1990

FILE COPY



Facility INformation Detail (FIND)

Equipment List

Facility ID	128868
Company Name	LOS ANGELES UNIFIED SCHOOL DISTRICT
Address	18605 ERWIN ST RESEDA, CA 91335

Appl_Nbr	Permit_Nbr	Issued_Date	Permit_Status	Eq_Type	Equip_Description	Appl_Date	Appl_Status
388330				Basic	BOILER-(<2MMBTU/HR) R-222	6/20/2001	BANKING/ PLAN GRANTED, NON BILLABLE
388331				Basic	BOILER-(<2MMBTU/HR) R-222	6/20/2001	BANKING/ PLAN GRANTED, NON BILLABLE

Page 1 of 1 (2 records)

Page 1

8

Facility INformation Detail (FIND)

Equipment List

Facility ID	19616
Company Name	SEQUOIA JR HI SCH
Address	18605 ERWIN ST RESEDA, CA 91335

Appl_Nbr	Permit_Nbr	Issued_Date	Permit_Status	Eq_Type	Equip_Description	Appl_Date	Appl_Status
G01590	P25799		INACT_NR	Control	SPRAY BOOTH PAINT AND SOLVENT		PERMIT TO OPERATE GRANTED

78P235M—1-65

434 South San Pedro Street **AIR POLLUTION CONTROL DISTRICT** Los Angeles, Calif. 90013

PERMIT TO OPERATE

P 25799

Sector A

Operation under this permit must be conducted in compliance with all data and specifications included with the application under which this permit is issued. The equipment must be properly maintained and kept in good operating condition at all times. In accordance with Rule 10(c), this Permit to Operate must be posted or accessible.

LEGAL OWNER OR OPERATOR:	LOS ANGELES CITY SCHOOL DISTRICTS SEQUOIA JR. HIGH SCHOOL
EQUIPMENT LOCATED AT	18605 ERWIN STREET RESEDA, CALIFORNIA
EQUIPMENT DESCRIPTION AND CONDITIONS:	SPRAY BOOTH, BINKS, FLOOR TYPE, 6'-0" W. x 7'-0" H. x 6'-6" D., WITH BAFFLES AND A 1 H.P. EXHAUST FAN.

Appl. No. G-1590

- SUBJECT TO THE FOLLOWING CONDITION -

THIS EQUIPMENT MUST NOT BE OPERATED IN A MANNER WHICH RESULTS IN THE DISCHARGE INTO THE ATMOSPHERE IN ANY ONE DAY, OF MORE THAN 40 POUNDS OF ORGANIC MATERIALS FROM THE USE OF PHOTOCHEMICALLY REACTIVE ORGANIC SOLVENTS UNLESS SUCH DISCHARGE IS CONTROLLED TO COMPLY WITH RULE 66.

THIS PERMIT BECOMES VOID UPON ANY CHANGE OF OWNERSHIP OR ADDRESS, OR ANY ALTERATION

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 20, Chapter 2, Article 3, of the Health and Safety Code of the State of California or the Rules and Regulations of the Air Pollution Control District. This permit cannot be considered as permission to violate existing laws, ordinances, regulation or statutes of other governmental agencies.

GOVERNMENT APPLICATION - NO FEE REQUIRED

AIR POLLUTION CONTROL OFFICER

BY Beth Malin

Beth Malin, Permit Section

DATE May 17, 1968

VOID UNLESS VALIDATED

APPENDIX D-5

CALIFORNIA DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

SUBJECT SITE

Closest Reported Oil Well (San-Val Oil Co. LTD 1)

Approx. Scale:
0 870 1,740 feet

Source: California Division of Oil, Gas, and Geothermal Resources (http://maps.conservation.ca.gov/doggr)

APPENDIX E

PRELIMINARY ENVIRONMENTAL SCREENING CHECKLIST

Preliminary Environmental Screening of Proposed Project at Existing School Site

Project: Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Reseda, CA

Selection Criteria	Yes	No	Comments
Powerlines/Electromagnetic Fields [CCR, Title 5, 14010(c)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from 50-133 kV powerlines/electromagnetic fields within 100 feet of the site?		X	
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from 220-230 kV powerlines/electromagnetic fields within 150 feet of the site?		X	
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from 500-550 kV powerlines/electromagnetic fields within 350 feet of the site?		X	
Railroads [CCR, Title 5, 14010(d)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from railroads within 1,500 feet of the site?		X	
Traffic Noise [CCR, Title 5, 14010(e)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from adjacent roads or freeways that will adversely affect the educational program?		X	
Faults [CCR, Title 5, 14010(f)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from an active earthquake fault or fault trace which may be onsite?		X	
Flood or Inundation Area [CCR, Title 5, 14010(g)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from flooding or dam inundation?		X	
Pipelines and Above Ground Tanks [CCR, Title 5, 14010(h)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from nearby above-ground water or fuel storage tanks?		X	
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from above-ground or underground pipelines located within 1,500 feet of the site?		X	
Liquefaction and Landslides [CCR, Title 5, 14010(i)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from liquefaction or landslides?		X	
Traffic and Pedestrian Safety [CCR, Title 5, 14010(l)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from an adjacent major arterial street?		X	
Compatible Zoning [CCR, Title 5, 14010(m)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from the zoning surrounding the site?		X	

Preliminary Environmental Screening of Proposed Project at Existing School Site

Project: **Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Reseda, CA**

Selection Criteria	Yes	No	Comments
Light, Wind, Air Pollution [CCR, Title 5, 14010(q)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from light, wind or air pollution?		X	
Easements [CCR, Title 5, 14010(r)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from easements on or adjacent to the site which may restrict access or building placement?		X	
Border Zone Property [CCR, Title 5, 14010(t)]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a significant disposal of hazardous waste within 2,000 ft. of the site?		X	
Cellular Phone Towers [LAUSD Board Resolution]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a cellular phone tower on or adjacent to the site?		X	
Air Pollution [LAUSD Board Resolution]			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a major transportation corridor (freeway, major rail line) within 500 feet?		X	
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a major stationary source of emissions within 500 feet?		X	
Is the school on the Priority List of Schools Most at Risk from Air Pollution?		X	
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a high-risk facility previously identified by OEHS?		X	
Methane Zone			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from a known methane zone or oil field?		X	
Oil Wells			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from an onsite oil well?		X	
Airports			
Will the project create any new significant safety hazards or exacerbate any existing safety hazards to students from an airport within two nautical miles of the site?		X	

Environmental Excellence

Eco & Associates, Inc. ▪ 1855 W. Katella Ave. ▪ Suite 340 ▪ Orange ▪ CA ▪ 92867 ▪ phone (714) 289-0995 ▪ fax (714) 289-0965

July 21, 2016

Eric Longenecker
Office of Environmental Health and Safety
Los Angeles Unified School District
333 South Beaudry Avenue, 21-220-02
Los Angeles, California 90017

Subject: Preliminary Endangerment Assessment (PEA) Workplan for the Sherman Oaks Center for Enriched Studies (SOCES) located at 18605 Erwin Street, in the Community of Reseda, California

Eco & Associates, Inc. (Eco) is pleased to present this Preliminary Endangerment Assessment (PEA) Workplan for the subject Site. The purpose of this assessment is to determine if the Site's surficial soils have been impacted with contaminants of potential concern. This workplan presents a brief review of the Site's background, potential contaminant sources, and Eco's recommended sampling and analysis program. The data provided in this workplan is based on a Phase I Environmental Site Assessment (ESA) conducted at the Site by Eco in May 2016.

Site Background

Based on data collected during the Phase I ESA, the Site was in use as an animal pasture in the 1920s. It was periodically in agricultural use (as part of a larger field) in the 1930s and 1940s. Between 1947 and 1952, one dwelling was constructed in the Site's northwestern corner (existing transportation office). Four single-family dwellings were constructed in the Site's southern portion during this period. These four southern dwellings were removed between 1953 and 1954. All of the on-site buildings, with the exception of the portable classrooms and pre-existing northwestern building were constructed in 1954. The sidewalks, canopies, pavement between the buildings, and paved ball courts in the Site's northeastern and northwestern portions were also constructed in 1954. The school operated as Sequoia Junior High School between 1954 and 1981. It has been in use as the Sherman Oaks Center for Enriched Studies (SOCES) since 1981. With the exception of modular buildings in the Site's eastern portion, the on-site buildings have been in a similar state since 1954.

Potential Contaminant Sources within Site

The following contaminants of potential concern were identified at the Site during the Phase I ESA:

- **Lead.** Due to the age of the on-site buildings, it was considered likely that the paint on the buildings contains or formerly contained elevated lead concentrations. Due to its slow deterioration with time, elevated lead concentrations are anticipated in the soil adjoining older buildings. Note that the on-site buildings have been mostly adjoined by pavement since 1954. As such, the potential that the soils underlying this pavement have been impacted with lead is considered relatively low. Relatively elevated lead concentrations, however, are anticipated in soils within the planters that contain trees between the buildings, or any other unpaved areas adjoining the buildings.

Although the former on-site dwellings were less than 7 years of age when they were removed, there is a potential that leaded paint dust and fragments were generated during their demolition in approximately 1954. These former dwellings were located adjacent to the auditorium and Classroom Buildings D, E, and H (Figure 1).

- **Arsenic.** There is a potential that elevated arsenic concentrations (greater than background levels) are present in the soils immediately underlying the paved portions of the Site. It was formerly common practice to apply an arsenic-based herbicide to soil immediately prior to paving with asphalt.
- **Pesticides.** As noted above, the Site was in periodic agricultural use (fields) in the 1930s and 1940s. As such, it is considered possible that persistent pesticides were formerly used within the Site, and may have impacted the surficial soils. Due to the lack of orchards and row crops, which are relatively heavy users of pesticides, elevated pesticide concentrations (greater than regulatory levels) are not anticipated at the Site.
- **Gasoline and Diesel.** Two 55-gallon drums of gasoline and one 55-gallon drum of diesel were observed in a flammable materials storage room on the eastern side of the Utility Building. Indications of releases from these fuel containers were not evident at the time of this assessment. A drain hole located in the southern portion of this room would have drained the fuel from the floor of this room in the event of a significant release.

Recommended Soil Investigation

Based on the data presented above, Eco recommended that a limited soil investigation be conducted at the Site in the planned building areas in order to verify that elevated contaminant concentrations were not present in the soils underlying these areas. The recommended sampling locations, sampling depths, and chemical analyses are presented on the following table. The sampling locations are presented on Figure 1 (attached).

SAMPLING LOCATIONS, SAMPLING DEPTHS, AND CHEMICAL ANALYSES

SAMPLING LOCATIONS (SEE FIGURE 1)	BORING IDS	SOIL SAMPLING DEPTHS	CHEMICAL ANALYSIS
Lead:			
Exposed Soil Adjacent to Existing Buildings in the Planned Construction Area	S1 through S16	Surface (0-0.5), 1.5, and 2.5 feet	▪ Lead (6010B)
Arsenic:			
Soil Beneath Asphaltic Pavement Adjacent to Existing Buildings in Planned Construction Area	S17 through S56	Surface (0-0.5), 1.5, and 2.5 feet	▪ Arsenic (6010B)

SAMPLING LOCATIONS (SEE FIGURE 1)	**BORING IDS**	**SOIL SAMPLING DEPTHS**	**CHEMICAL ANALYSIS**
Pesticides:			
Entire Site (Former Agricultural Field)	S57 through S61	Surface (0-0.5), 1.5, and 2.5 feet	▪ Organochlorine pesticides (8081B)
Gasoline & Diesel Fuel:			
In Fuel Storage Room Adjacent to Drain	S62	2.5, 5, and 10 feet (coring required)	▪ Petroleum Hydrocarbons (8015c.c.) ▪ Volatile Organic Compounds (8260B)

TABLE NOTES:

- Standard environmental sampling procedures apply:
  - Use a cleaned hand auger at each boring.
  - Use laboratory-supplied glass jars to contain samples from S1 through S61.
  - Use stainless steel tubes to contain samples from S62 (cleaned drive sampler).
  - Chill samples collected from S57 to S62.
- Place the 1.5 and 2.5-deep samples on hold at Borings S1 through S61.
  These samples will be analyzed if needed to assess the vertical extent of impacted soil.
  Assume 20% additional analyses.
- Each collected soil sample at S62 will be analyzed.
- Place soil cuttings and decontamination fluids into labeled drums.
- Backfill borings with clean sand. Cap boring with soil, grass, or concrete, as appropriate.

Following the completion of soil sampling and chemical analysis, a formal report will be prepared and submitted to the Los Angeles Unified School District. This report, initially sent as a draft, will include a summary of the field procedures, summary analytical tables, figures, and laboratory reports. It will include a concise summary of the investigation's findings and conclusions.

If you have any questions or wish to discuss this PEA workplan, please feel free to contact the undersigned at (714) 289-0995.

Sincerely,
ECO & ASSOCIATES, INC.

Mohammad Estiri, Ph.D.
Project Director

Attachment: Figure 1 – Sampling Locations

Reference: Eco & Associates, Inc., 2016. *Phase I Environmental Site Assessment Report* 18605 Erwin Street, Reseda, California 91335; dated May 2016.

LEGEND:

- ○ Sampling Location to assess lead in soil (S1 through S16)
- ◆ Sampling location to assess arsenic in soil (S17 through S56)
- △ Sampling location to assess pesticides in soil (S57 through S61)
- ● Sampling location to assess fuels in soil (S62)
- ■ Electrical Transformer

N W E S

Approximate Scale:

0 180 feet

Environmental Excellence

Eco & Associates, Inc.
1855 W. Katella Avenue, Suite 340
Orange, California 92867

Phone: 714.289.0995 Fax: 714.289.0965

SAMPLING LOCATIONS

18605 Erwin Street
Reseda, California

PROJECT NO. Eco-16-711 | DATED July 2016 | FIGURE 1

Appendix E.

Noise and Vibration Background and Modeling Data

Noise and Vibration Background and Modeling Data

NOISE BACKGROUND

Terminology and Noise Descriptors

The following are brief definitions of noise terminology.

- **Sound.** A vibratory disturbance that, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise**. Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB)**. A unitless measure of sound on a logarithmic scale, which indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals (20 μPa).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels which approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (Leq); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Day-Night Level (L_{dn} or DNL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7 PM to 10 PM and 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as being equivalent in this assessment.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

Characteristics of Sound

Sound is a pressure wave transmitted through the air. When an object vibrates, it radiates part of its energy as acoustical pressure in the form of a sound wave. Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). The standard unit of measurement of the loudness of sound is the decibel (dB). The human hearing system is not equally sensitive to sound at all frequencies. Sound waves below 16 Hz are not heard at all and are "felt" more as a vibration. Similarly, while people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz. Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is usually used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Because of the physical characteristics of noise transmission and noise perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1 presents the subjective effect of changes in sound pressure levels. Typical human hearing can detect changes of approximately 3 dBA or greater under normal conditions. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA or greater is typically noticeable to most people in an exterior environment and a change of 10 dBA is perceived as a doubling (or halving) of the noise.

Table 1 Change in Sound Pressure Level, dB

Change in Apparent Loudness	
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen, Engineering Noise Control, 1988.

Point and Line Sources

Noise may be generated from a point source, such as a piece of construction equipment, or from a line source, such as a road containing moving vehicles. Because noise spreads in an ever-widening pattern, the given amount of noise striking an object, such as an eardrum, is reduced with distance from the source. This is known as "spreading loss." The typical spreading loss for point source noise is 6 dBA per doubling of the distance from the noise source.

A line source of noise, such as vehicles proceeding down a roadway, would also be reduced with distance, but the rate of reduction is affected by of both distance and the type of terrain over which the noise passes. Hard sites, such as developed areas with paving, reduce noise at a rate of 3 dBA per doubling of the distance while soft sites, such as undeveloped areas, open space and vegetated areas reduce noise at a rate of 4.5 dBA per doubling of the distance.1 These represent the extremes and most areas would actually contain a combination of hard and soft elements with the noise reduction placed somewhere in between these two factors. Unfortunately, the only way to actually determine the absolute amount of attenuation that an area provides is through field measurement under operating conditions with subsequent noise level measurements conducted at varying distances from a constant noise source.

Objects that block the line of sight attenuate the noise source if the receptor is located within the "shadow" of the blockage (such as behind a sound wall). If a receptor is located behind the wall, but has a view of the source, the wall would do little to reduce the noise. Additionally, a receptor located on the same side of the wall as the noise source may experience an increase in the perceived noise level, as the wall would reflect noise back to the receptor compounding the noise.

---

[1] Surface type or ground cover is defined as the "hardness" or "softness" of the surrounding area. "Hard site environment" is areas with acoustically hard ground (e.g., pavement or water). Distance attenuation from a line source (i.e., roadway or railway) with a hard site environment is 3 dB per doubling of distance (dB/DD). "Soft site environment" is areas with acoustically soft ground (e.g., lawn or loose dirt or agricultural uses). Ground cover can affect the sound propagation rate by as much as an additional 1.5 dB/DD. (Note that this rate occurs only when both the noise source and the receiver are close to the ground and the terrain between the two is flat and soft.) As a result of this additional attenuation, the line-source sound levels decrease at a rate of 4.5 dB/DD at soft sites.

Noise Metrics

Several rating scales (or noise "metrics") exist to analyze adverse effects of noise, including traffic-generated noise, on a community. These scales include the equivalent noise level (Leq), the community noise equivalent level (CNEL) and the day/night noise level (Ldn). Leq is a measurement of the sound energy level averaged over a specified time period.

The CNEL noise metric is based on 24 hours of measurement. CNEL differs from Leq in that it applies a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when quiet time and sleep disturbance is of particular concern). Noise occurring during the daytime period (7:00 AM to 7:00 PM) receives no penalty. Noise produced during the evening time period (7:00 to 10:00 PM) is penalized by 5 dB, while nighttime (10:00 PM to 7:00 AM) noise is penalized by 10 dB. The Ldn noise metric is similar to the CNEL metric except that the period from 7:00 to 10:00 PM receives no penalty. Both the CNEL and Ldn metrics yield approximately the same 24-hour value (within 1 dB) with the CNEL being the more restrictive (i.e., higher) of the two.[2]

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dBA, a tickling sensation occurs in the human ear even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dBA, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dBA will result in dizziness or loss of equilibrium. The ambient or background noise is widespread and generally more concentrated in urban areas than in outlying, less-developed areas (see Table 2).

---

[2] Ldn and CNEL values rarely differ by more than 1 dB. As a matter of practice, Ldn and CNEL values are considered equivalent and are treated as such in this assessment.

Table 2 Common Sound Levels and Their Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environments	Subjective Evaluations Relative to 70 dB
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle at a Few Feet Away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	
Average Office	60	Quiet	One-half as loud
Suburban Street	55	Quiet	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	One-quarter as loud
Large Transformer	45	Quiet	
Average Residence without Stereo Playing	40	Faint	One-eighth as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing

Source: California Department of Transportation (Caltrans) 1998, October. Traffic Noise Analysis Protocol.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities such as railroads or vibration-intensive stationary sources, but can also be associated with construction equipment, such as jackhammers, pile drivers, and hydraulic hammers. Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is described as the velocity, and the rate of change of the speed is described as the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During the construction of a building, the operation of construction equipment could cause groundborne vibration. The three main wave types of concern in the propagation of groundborne vibrations are surface or Rayleigh waves, compression or P-waves, and shear or S-waves.

- Surface or Rayleigh waves travel along the ground surface. They carry most of their energy along an expanding cylindrical wave front, similar to the ripples produced by throwing a rock into a lake. The particle motion is more or less perpendicular to the direction of propagation (known as retrograde elliptical).

- Compression or P-waves are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal, in a push-pull motion. P-waves are analogous to airborne sound waves.

- Shear or S-waves are also body waves, carrying their energy along an expanding spherical wave front. Unlike P-waves, however, the particle motion is transverse, or perpendicular to the direction of propagation.

The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak of the vibration signal and RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). Often, vibration is presented and discussed in dB units to compress the range of numbers required to describe the vibration. All PPV and RMS velocity are in in/sec and all vibration levels in this study are in dB relative to 1 micro-inch per second (abbreviated as VdB). The threshold of perception is approximately 65 VdB. Typically groundborne vibration generated by manmade activities attenuates rapidly with distance from the source of the vibration. Manmade vibration problems are usually confined to short distances (500 feet or less) from the source.

Construction generally includes a wide range of activities that can generate groundborne vibration. In general, demolition of structures generates the highest vibrations. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at distances within 200 feet of the vibration sources. Heavy trucks can also generate groundborne vibrations that vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, etc., all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration of normal traffic on streets and freeways with smooth pavement conditions. Trains generate substantial quantities of vibration due to their engines, steel wheels, and heavy loads.

Sensitive Receptors

Certain land uses are particularly sensitive to noise and vibration. Noise- and vibration-sensitive uses include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, guest lodging, libraries, religious institutions, hospitals, nursing homes, and passive recreation areas are generally more sensitive to noise than commercial and industrial land use.

Noise Regulations and Guidelines

Compliance with State and LAUSD noise requirements and guidelines is required for schools as described below.

Federal

United States Code of Regulations, Title 14, Part 150

The United States Code of Federal Regulations (CFR), Title 14 (Aeronautics and Space), Part 150, Airport Noise Compatibility Planning, has procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs.[3] It prescribes methods to determine exposure of individuals to noise from the operations of an airport and also identifies land uses that are normally compatible with various levels of exposure to noise. For schools, an L_{dn} exposure greater than 65 dBA is considered incompatible. Development of schools exposed to annual 65 dBA L_{dn} noise levels due to aircraft noise should be prohibited.[4]

State

California Code of Regulations, Title 5, Section 14040(q)

Under Title 5,[5] the California Department of Education (CDE) regulations require the school district to consider noise in the site selection process. As recommended by CDE guidance, if a school district is considering a potential school site near a freeway or other source of noise, it should hire an acoustical engineer to determine the level of sound that the site is exposed to and to assist in designing the school should that site be chosen.

California Code of Regulations, Title 24, Part 2

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission. The most recent building standard adopted by the legislature and used throughout the state is the 2013 version, often with local, more restrictive amendments that are based on local geographic, topographic, or climatic conditions.[5] The State of California's noise insulation standards are codified in the CBC. These noise standards are for new construction in California for the purposes of interior compatibility with exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential, schools, or hospitals, are near major transportation noises, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans must

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[3] US Code of Regulations Title 14 (Aeronautics and Space), Part 150 – Airport Noise Compatibility Planning. . http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=611cdd3c85df7535fc6e7bc54891204b&r=PART&n=14y3.0.1.3.21.

[4] Note that footnotes to the compatibility table prohibiting school uses in incompatible noise environments state: "Where the community determines that residential or school uses much be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals…However, the use of NLR criteria will not eliminate outdoor noise problems."

[5] Title 5. Education, Division 1. California Department of Education, Chapter 13. School Facilities and Equipment, Subchapter 1., School Housing, Article 2. School Sites, 14010. Standards for School Site Selection. http://government.westlaw.com/linkedslice/default.asp?SP=CCR-1000

demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

California Code of Regulations, Title 21, Sub-chapter 6

The Airport Noise Standards establishes 65 dBA CNEL as the acceptable level of aircraft noise for persons living in the vicinity of airports. Title 21 applies to airports that have been designated "noise problem airports," which include LAX, Long Beach, and Bob Hope Airports. Noise-sensitive land uses in locations where the aircraft exterior noise level exceeds 65 dBA CNEL are generally incompatible, unless (1) an aviation easement for aircraft noise has been acquired by the airport proprietor or (2) the residence is a highrise apartment or condominium that has an interior CNEL of 45 dBA or less in all habitable rooms despite aircraft noise and has an air circulation or air conditioning system, as appropriate.

City of Los Angeles

Exterior

As specified in Sections 112.02 and 112.05 of the City of Los Angeles Municipal Code, noise attributable to mechanical equipment (such as heating, air conditioning, and ventilation equipment (HVAC) systems or any pumping, filtering, or heating equipment) cannot exceed the ambient noise level by more than 5 decibels. Ambient noise levels can be as-measured at the project site or established via Code-presumed levels. For the nearby residential neighborhood (Zone R1), the presumed ambient levels are 50 dBA (daytime, 7:00 AM to 10:00 PM) and 40 dBA (nighttime, 10:00 PM to 7:00 AM).

Further, power-equipment, including lawn mowers, backpack blowers, small lawn and garden tools, and riding tractors are restricted to no more than 65 dBA Leq at residential properties.

Construction Activities

Section 41.40 of the Los Angeles Municipal Code prohibits construction or repair work between 9:00 PM and 7:00 AM the following morning, Monday through Friday; between 6:00 PM and 8:00 AM the following morning, Saturdays or federal holidays; and anytime on Sundays. Further, Section 112.05 specifies the maximum noise level from powered equipment[6] as 75 dBA at a distance of 50 feet from the source.[7]

LAUSD

LAUSD Standard Conditions of Approval (November 2015) for noise are described below.

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[6] The specified equipment for this limitation includes: construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors, and pneumatic or other powered equipment.

[7] However, this noise limitation does not apply where compliance is technically infeasible. Technically infeasible means that the above noise limitation cannot be met despite the use of mufflers, shields, sound barriers and/or any other noise reduction device or techniques during the operation of equipment.

Exterior

The LAUSD Standard Condition of Approval SC-N-1 deals with exterior campus noise. The trigger for compliance is: "Exterior noise levels are or would be greater than 70 dBA L_{10} or 67 dBA L_{eq}." The associated standard condition is: "The LAUSD shall include features such as sound walls, building configuration, and other design features in order to attenuate exterior noise levels on a school campus to less than 70 dBA L_{10} or 67 dBA L_{eq}."

Interior

The LAUSD Standard Condition of Approval SC-N-2 deals with interior campus noise. The trigger for compliance is: "Interior classroom noise levels would be greater than 55 dBA L_{10} or 45 dBA L_{eq}." The associated standard condition is:

> "The LAUSD shall analyze the acoustical environment of the school (such as traffic) and the characteristics of planned building components (such as heating, ventilation, and air conditioning [HVAC]), and design to achieve interior classroom noise levels of less than 55 dBA L_{10} or 45 dBA L_{eq} with maximum (unoccupied) reverberation times of 0.6 seconds. Noise reduction methods shall include, but are not limited to, sound walls, building and/or classroom insulation, HVAC modifications, double-paned windows, and other design features in order to achieve the noise standards.

- The District should acknowledge the ANSI (American National Standards Institute) S12 standard as a District goal that may presently not be achievable in all cases.
- Where economically feasible, new school design should achieve classroom acoustical quality consistent with the ANSI standard and in no event exceed the current CHPS (California High Performance Schools) standard of 45 dBA.
- Where economically feasible, new HVAC (Heating, Ventilating, and Air Conditioning) installations should be designed to achieve the lowest possible noise level consistent with the ANSI standard. In no event should these installations exceed the current CHPS standard of 45 dBA.
- To promote the development of lower noise emitting HVAC units, the District's purchase of new units should give preference to manufacturers producing the lowest noise level at the lowest cost.
- Existing HVAC units operating in excess of 50 dBA should be modified."

Besides the 55 dBA L10 or 45 dBA Leq interior sound environment triggers, the LAUSD Standard Conditions also point out a design goal of achieving these interior environments in classrooms with maximum, unoccupied reverberation times of 0.6 seconds.

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NOISE ELEMENT

DEPARTMENT OF CITY PLANNING LOS ANGELES, CALIFORNIA

Noise Element
of the Los Angeles City General Plan

City Plan Case No. 97-0085
Council File No. 96-1357

Adopted by the City Council February 3, 1999
Approved by the City Planning Commission November 12, 1998

City of Los Angeles

Richard Riordan, Mayor

City Council

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2nd District — Joel Wachs
3rd District — Laura N. Chick
4th District — John Ferraro
5th District — Michael Feuer
6th District — Ruth Galanter
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9th District — Rita Walters
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11th District — Cindy Miscikowski
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Introduction

California State Government Code Section 65302g mandates that noise elements be included as a part of city general plans and that cities adopt comprehensive noise ordinances. The city's 1975 Noise Plan and ordinance achieved compliance with state law. This element revises and updates the 1975 plan and references the city's noise standards, which are contained in Los Angeles Municipal Code Section 111 et seq. In addition to addressing issues, such as airport related noise, which were addressed in the 1975 plan, the element addresses noise sources and noise mitigation strategies and regulations that came into existence after 1975, including new fixed rail systems.

The noise element applies to the city as a whole. It addresses noise mitigation regulations, strategies and programs and delineates federal, state and city jurisdiction relative to rail, automotive, aircraft and nuisance noise.

Regulation of noise relative to vehicles is largely outside the authority of municipal government. Primary municipal authority relates to regulation of land use, implementing federal and state regulations and enforcing nuisance noise. This element describes noise management programs of each jurisdictional entity, as they relate to the City of Los Angeles.

The exhibits contained herein include examples of noise commonly experienced by city dwellers, local airport noise contours, state environmental guidelines and a history of Los Angeles transportation and associated noise issues.

Chapters III and IV set forth noise management goals, objectives, policies and programs of the City of Los Angeles. Implementation programs include noise mitigation guidelines for community planners and permit processors, noise management activities in which the city is engaged and affirmation of the Alameda Corridor Project which will consolidate freight rail lines, thereby reducing noise impacts on local neighborhoods.

Chapter I — Background

Planning Area

The Noise Element relates to the entire City of Los Angeles. Within the city's boundaries are approximately 467 square miles of land area, including approximately 214 square miles of hills and mountains. The San Gabriel and Santa Susana Mountains bound the city on the north, the Santa Monica Mountains extend across the middle of the city and the Palos Verdes Hills and Pacific Ocean are on the south and west. Some noise impacts are generated by sources, such as rail, highway and freeway systems, which are within the purview of other governmental entities. Noise generated by aircraft associated with Los Angeles-based air facilities potentially impact people outside the city. Therefore, the element takes into account other jurisdictions and governmental entities.

Demographics

The 1990 federal census estimated that the city's population was 3,485,399 individuals. The 1996 Citywide General Plan Framework Element (aka Framework) of the city's general plan estimates that the population of the city would be increased by approximately 820,000 people to 4,306,564 by the year 2010 and that employment will be increased by an estimated 390,000 jobs. Circulation and transportation systems, a primary source of urban noise, continue to evolve in response to the city's changing needs and introduction of new technology.

California State Noise Element Requirements

Content

In 1971 the state of California required cities and counties to include noise elements in their general plans (Government Code Section 65302 et seq.). State law intended that noise elements guide policy makers in making land use determinations and in preparing noise ordinances that would limit exposure of their populations to excessive noise levels. The law required that local jurisdictions prepare noise ordinances that would help manage noise. In 1984, state noise element provisions were revised to shorten the list of noise element requirements, encourage local jurisdictions to design their own noise control approaches and to eliminate the requirement that general plan noise and circulation elements be consistent with each other.

Under the 1984 provisions, a noise element is required to "recognize" guidelines prepared by the Office of Noise Control of the California Department of Health Services and to analyze and quantify, "to the extent practicable, as determined by the legislative body," noise from the following sources: highways and freeways; primary arterials and major local streets; passenger and freight on-line railroad operations and ground rapid transit systems; commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands, and other ground facilities and maintenance functions related to airport operation; local industrial plants, including, but not limited to, railroad classification yards; and other ground stationary noise sources identified by local agencies as contributing to the community noise environment.

The subject element complies with state law by describing airport related noise management programs and identifying and analyzing noise sources and noise management measures. It also provides guidelines for noise management within Los Angeles.

Noise Measurement and Standards

State law (Government Code Section 65302 et seq.) specifies that, as is practical, a community noise equivalent level (CNEL) or day/night average level (Ldn) be used to measure noise exposure for the identified noise sources. Modeling is permitted as a tool for measuring noise. However, as will be noted in Chapter II, state and federal law has preempted local authority with reference to many of the above listed noise sources.

In response to the 1971 state requirements, the city simultaneously prepared a noise plan and a comprehensive noise ordinance. It utilized noise contours and modeling in order to establish ambient noise standards that were linked to zoning classifications. Identical standards were incorporated into the ordinance and plan to facilitate implementation and enforcement. The ordinance was adopted in 1973 (Los Angeles Municipal Code Section 111 et seq.). It has been amended several times. The city's first noise plan was adopted in 1975. The intent of state law was to prompt local jurisdictions to establish noise standards vis-a-vis the state's noise insulation standards and to enact plan implementation measures to address local noise problems. The city met these objectives with the adoption of the ordinance and plan. The noise standards contained in the ordinance guide the city's noise management and are consistent with state and federal standards.

The California Environmental Quality Act (CEQA) permit processing procedures and the ambient noise standards contained in the city's noise ordinance guide noise impact assessment and mitigation relative to new development that is subject to CEQA environmental assessment review. This element, combined with the city's noise ordinance, complies with the noise measurement and standards requirements of state law, to the greatest extent practicable, by providing sample noise exposure contours for local airports and by outlining airport and other noise management programs.

Insulation Standards

The California Department of Health Services noise office, which is cited in the 1984 general plan law, no longer exists. The most current guidelines prepared by the state noise officer were issued in 1987 and are contained in the "General Plan Guidelines" issued by the Governor's Office of Planning and Research in 1990. The standards contained in the city noise ordinance are consistent with the noise officer's 1987 guidelines.

General Plan Consistency

State general plan law requires that all elements and all parts of a general plan be integrated, internally consistent and compatible (Government Code Section 65300.5). The Framework element of the city's general plan provides broad policies and guidelines for preparation of the other elements of the general plan. It identifies the noise element as one of twelve general plan elements but contains no other noise element policies or guidelines. The subject noise element references and is consistent with general plan community plans that contain noise management issues or programs. In addition, it references and is consistent with local airport plans, as required by California Government Code Section 65302.3.

Implementation

General plan law requires that a general plan be meaningfully implemented (Government Code Section 65400). The noise element is implemented by a variety of city regulations. In addition, the airport plans and individual community plans contain implementation features that address noise related land use issues.

Element Scope

The subject element updates and replaces the city's 1975 noise plan. It identifies new significant potential noise sources, addresses the issue of vibration relative to rail and identifies historic and current significant noise management approaches.

Issues Not Addressed

Occupational noise is not addressed. State and federal governments, not cities, have jurisdiction over standards and enforcement relative to occupational health, including noise.

The goals, standards, objectives, policies and programs presented herein are within the jurisdiction of the City of Los Angeles. Programs outside the authority of the city are not listed. For example, rail, state highway and freeway and aspects of airports that are unrelated to land use generally are under federal and/or state, not municipal authority. The roles and relationship of various authorities are discussed in Chapter II, providing a context within which the element and can be better understood.

Chapter II — Existing Conditions, Noise Impact Issues and Noise Management History

Introduction

Noise is unwanted sound and, therefore, is an important factor in the quality of urban life. There are two main types of sound: ambient and intrusive. Ambient sound is the background sound that aggregates all sound emissions, far and near, as received within a particular locale. It is the "given" level of sound to which we are accustomed in our residential, work or other particular environments; the generally not unpleasant "hum" of sound about us. Intrusive sound is greater than the ambient sound level; it is perceived as "noise." It may be intermittent (siren, barking dog) or continuous (air conditioner equipment). Abatement of intrusive noise generally involves one or more of the following: reducing the noise at the source (turning down the volume), isolating the noise source by establishing buffer land uses (industrial uses around airports), blocking noise (walls, berms), or protecting the receiver (industrial ear protectors, home insulation).

The decibel (dB) is the standard unit used for measuring noise. To more closely approximate noise as it is received by the human ear at different frequencies, the decibel scale is 'A-weighted' (dBA). 'A' measures the level of sound the way sound is received by the human ear. The range of human hearing is approximately 3 to 140 dBA, with 110 dBA considered intolerable or painful to the human ear. Continuous levels of 70 dBA or higher can cause loss of hearing. A comparison of types of commonly experienced environmental noise is provided in Exhibit H. The goal of all noise mitigation is to reduce or manage intrusive noise so as to achieve or maintain healthful ambient sound levels.

Since the adoption of the city's noise plan in 1975, significant noise management has taken place, largely due to public demand for noise abatement. Watershed legislation was the National Environmental Policy Act of 1969 (NEPA) which required all significant potential environmental impacts to be evaluated and mitigation measures determined prior to issuance of land development permits. NEPA led to the establishment of state and local environmental laws, including the 1971 California Environmental Quality Act (CEQA) and requirements that general plans contain noise elements and that cities adopt local noise ordinances. Public concerns about noise led to establishment of national transportation policies and programs, including noise standards for aircraft. NEPA and CEQA require environmental assessment and imposition of noise mitigation measures for new development projects, including transportation projects. Millions of dollars in public funds have been expended to reduce impacts of noise from existing airports and freeways, as well as for research and development of new design, noise suppression technology and regulations for mitigating noise from transportation and other sources.

Transportation systems are a primary source of urban noise. Management of noise from the most significant of these sources (aircraft, trains and freeways) generally has been preempted by federal and state authority. Primary municipal authority is regulation of land use. The City of Los Angeles has established standards for ambient noise levels that are correlated with land use zoning classifications. The standards are contained in the city's noise ordinance, Los Angeles Municipal Code (LAMC) Section 111 et seq. Compliance is achieved by a variety of means, including barriers, buffers, separation of incompatible uses and reduction of sound at its source.

The first section of this chapter discusses ordinances and other measures for regulating noise sources and mitigating noise impacts within the city. The other sections discuss the evolution of noise impacts and management measures associated with local transportation systems. The Appendix provides an historical perspective of the evolution of transportation systems and associated noise issues.

Building Sound Insulation and Nuisance Noise

Several city, state and federal regulations address sound insulation and nuisance noise. These range from use permit limitations and building construction provisions to nuisance abatement. This section summarizes the city's major noise management procedures and regulations.

California And Federal Legislation

CALIFORNIA NOISE INSULATION STANDARDS

The California Noise Insulation Standards of 1988 (California Building Code Title 24, Section 3501 et seq.) establishes inter-dwelling (between units in a building) and exterior sound transmission control measures. It requires that interior noise levels from the exterior source be reduced to 45 decibels (dB) or less in any habitable room of a multi-residential use facility, e.g., hotels, motels, dormitories, long-term care facilities, and apartment houses and other dwellings, except detached single-family dwellings. Measurements are based on a day/night average sound level (Ldn) or the community noise equivalent level (CNEL). Both Ldn and CNEL utilize averaging, not single event exposure. Therefore, the passing of a single train during a day would be averaged over the 24-hour period, resulting in negligible exposure.

The significant noise generation sources identified by the Noise Insulation Standards are: highways, country roads, city streets, railroads, rapid transit lines, airports and industrial areas. Noise-sensitive uses planned in proximity to such uses are required to be designed to prevent intrusion of significant exterior noise. The applicant must submit an acoustical analysis, prepared by or under the supervision of an acoustical engineer, indicating that a 45 dB or less interior noise level will be achieved within each proposed habitable room. Interior allowable noise levels can be achieved by reorienting the project on the site, providing setbacks, shielding (e.g., buffer walls or berms) the receptor from the noise source, incorporating sound insulation into the building construction, requiring that windows be unopenable or remain closed and air conditioning be provided, and any other methods.

To help permit processors assess whether special acoustical analysis and mitigation is needed, local jurisdictions are to identify areas of 60 dB or greater, averaged over a 24-hour period. The noise element of the general plan is to be used in helping to identify sites with noise levels of 60 dB or greater. In addition, the state general plan law (Government Code Section 65302 et seq.) calls for noise elements to "recognize" the state health department noise guidelines and to quantify, "to the extent practicable, as determined by the legislative body, current and projected noise levels" from transportation and other significant sources. This element identifies noise levels of 65 dB or greater with reference to airports.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The National Environmental Policy Act of 1969 (NEPA) requires that an environmental impact statement (EIS) be prepared for federal or federally funded (including loans) projects. The EIS identifies potential impacts of the project and evaluates feasible alternatives for mitigating the impacts. The impacts and mitigation alternatives are taken into account by decision makers. However, mitigation of impacts is not required by NEPA.

FEDERAL NOISE CONTROL ACT

The Noise Control Act of 1972 (42 United States Code 4901 et seq.) gives the Environmental Protection Agency (EPA) authority to publish regulations and standards relative to transportation, construction and electrical equipment, motors, engines, etc. It reaffirms the Federal Aviation Administration and EPA preemption of state and local control over aircraft noise. It requires that the FAA to consult with the EPA prior to promulgating or amending noise regulations.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act of 1970 (CEQA) was patterned in part after NEPA. It mandates that mitigation measures be part of a discretionary land use development permit approval, including building permits, unless a project is deemed exempt from environmental assessment procedures. CEQA is intended to protect the natural environment from avoidable damage, including from noise impacts, by requiring that proposed land development projects mitigate identified significant potential impacts. Where an environmental impact report is required, the decision maker may issue a permit even if the potential impact cannot be reduced to a level of insignificance, providing the decision maker finds that project benefits outweigh the unavoidable impacts. Impacts on the environment (or known future environment) also are considered, including noise from exterior sources on project users or residents. Where federal agencies or funding is involved, both NEPA and CEQA apply.

Conservation of nonrenewable energy resources is a consideration under NEPA and CEQA. Mitigation measures typically include building insulation to reduce heat gain and loss so as to reduce the amount of energy needed to heat or cool buildings. Even without CEQA mitigation requirements, most new construction includes energy insulation features, combined with air conditioning and heating systems, to make projects more energy efficient. Insulation reduces exterior-to-interior noise impacts.

City Noise Ordinances

The City of Los Angeles has numerous ordinances and enforcement practices that apply to intrusive noise and that guide new construction. These are summarized in the following sections.

The city's comprehensive noise ordinance (LAMC Section 111 et seq.) establishes sound measurement and criteria, minimum ambient noise levels for different land use zoning classifications, sound emission levels for specific uses (radios, television sets, vehicle repairs and amplified equipment, etc.), hours of operation for certain uses (construction activity, rubbish collection, etc.), standards for determining noise deemed a disturbance of the peace, and legal remedies for violations. Its ambient noise standards are consistent with current state and federal noise standards. They are correlated with land use zoning classifications in order to guide the measurement of intrusive noise that results in intermittent (periodic) or extended impacts on a geographically specific site. The intent is to maintain identified ambient noise levels and to limit, mitigate, or eliminate intrusive noise that exceeds the ambient noise levels within the zones specified. The standards guide building construction and equipment installation, equipment maintenance and nuisance noise enforcement. The city council initially adopted the ordinance in 1973 and periodically amends it to reflect current issues and noise management approaches.

As a general rule, the city's building and safety department enforces noise ordinance provisions relative to equipment (air conditioning units, swimming pool pumps, car wash facilities and other machinery) and the police department enforces provisions relative to noise generated by people (parties, amplified sound, etc.). The police department also is authorized to enforce the mechanical equipment and other provisions of the noise ordinance, relative to nuisance noise complaints.

Zoning And Land Use

The city's planning and zoning code (LAMC Section 11 et seq.) contains a variety of provisions that directly or indirectly mitigate noise impacts on, or impacts that are associated with, different types of land uses. Permit processing is guided by the general plan, especially the community plans which together are the city's land use element. The plans designate appropriate land use (zoning) classifications. Noise element programs (Chapters III and IV) outline considerations that may be taken into account during community plan preparation and planning permit processing. The noise ordinance guides land use considerations by setting maximum ambient noise levels for specific zones.

Los Angeles was the first jurisdiction in the nation to establish zoning by land use category (1904 and 1908). Under the guidance of the city's first planning director, Gordon Whitnall, the zoning was changed (1930) to create the standardized classifications that are used today. These include regulation of height, area (including yards), density and parking. The combination of the various regulations contributes significantly to reduction of potential noise impacts throughout the city.

The most basic noise management measure is traditional zoning that separates agricultural, residential, commercial and industrial uses. Another is the front yard set back that not only adds attractiveness to a neighborhood but serves to distance homes from adjacent street noise. Side and rear yards also serve as noise buffers. Through zone change and subdivision processes, site or use specific conditions can be imposed to assure compatibility of land use and to protect users of a site from impacts from adjacent uses.

The commercial (C zones) and manufacturing (M zones) provisions of the code contain use specific requirements intended to reduce noise, odor and other impacts on adjacent uses. These include prohibiting of certain commercial and industrial uses within so many feet of residential or less restrictive uses or zones, requiring increased setbacks from residential uses, limiting hours of operation, containing uses wholly within an enclosed buildings, requiring sound walls, prohibiting openings that face residential uses and prohibiting audibility of noise outside a facility.

Conditional use and use variance permits (LAMC Sections 12.24, 12.27, 12.28 and 12.29) allow the planning commission, zoning administrators and, on appeal, board of zoning appeals and city council to assess potential use impacts and impose conditions to mitigate noise impacts. Conditional use or use variance permits are required in certain zones for schools, churches, homeless shelters, municipal facilities, correctional institutions, alcohol sales, golf courses, parks, rubbish disposal projects, mixed use development, stadia, automobile service and repair facilities, certain types of parking, joint living and work quarters, mini-malls, hotels and motels, drive-thru food establishments, nightclubs, keeping of certain types of animals and other unique, potentially noise intrusive uses. In most cases the uses are allowed by right in less restrictive zones. Some are prohibited entirely in residential zones. The permitting procedures include site investigations, notice to neighbors and hearings to assist decision makers in determining if the use should be permitted and, if permitted, allow imposition of appropriate conditions of approval. Typical conditions include specific site design, setbacks, use limitations on all or parts of the site, walls and hours of operation so as to minimize noise and other impacts. Violation of conditions can result in permit revocation.

Supplemental use districts or "overlay zones" (LAMC Section 13) for such uses as oil drilling, animal slaughter, surface mining and equine keeping typically contain construction, installation and operational provisions that are intended to minimize or eliminate noise impacts on adjacent uses. For example, the surface mining provisions prohibit establishment of a surface mining district closer than 100 feet from a residential zone, unless a landscaped buffer berm is provided, and limit mining activity hours. Oil drilling district noise mitigation provisions include drilling operation term limits, drilling equipment noise guidelines and a requirement that oil production activities be inaudible outside the enclosed operations structure. In some cases, the commission and city council are authorized to impose additional conditions to further mitigate potential impacts associated with a particular supplemental use.

Other code provisions allow a zoning administrator to conditionally permit, without public hearing, particular uses allowed in a zone, provided that the uses meet certain criteria, such as provision of additional parking or walls. The additional parking requirements for such uses as health clubs, restaurants, trade schools and auditoriums in part are to minimize noise impacts, especially in the evening and at night on residential neighborhoods. Potential impacts include door slamming and people talking as they walk to their cars.

The authority to revoke, discontinue a use or to impose nuisance abatement conditions on established uses has become a major tool for reducing nuisance noise. Use permits may be revoked by the commission, zoning administrator, or, on appeal, by the board of zoning appeals or city council for nuisance (including disturbance of the peace) or noncompliance with conditions of a conditional permit. In addition, a zoning administrator may discontinue or, on appeal, the board or council, may impose operational conditions on existing commercial or industrial uses that are deemed a nuisance, including for excessive noise or disturbance of the peace (LAMC Section 12.21-A.15). These two procedures have been increasingly utilized in recent years to encourage owners to operate activities on their properties in a manner that is compatible with adjacent uses, particularly residential uses.

Building Sound Insulation Regulations

With the development of inexpensive insulation materials, air conditioning and improved noise reduction techniques it became economically feasible to design buildings that provide effective insulation from outside noise as well as from weather conditions. It has been estimated that standard insulation, efficiently sealing windows and other energy conservation measures reduce exterior-to-interior noise by approximately 15 decibels. Such a reduction generally is adequate to reduce interior noise from outside sources, including street noise, to an acceptable level. Building setbacks and orientation also reduce noise impacts.

Sound transmission control requirements were added to the national Uniform Building Code (UBC) in 1992. The UBC standards were incorporated into the city's building code (LAMC Section 91) in 1994. They are consistent with state noise insulation standards (California Building Code Title 24, Section 3501 et seq.), requiring that intrusive noise not exceed 45 dB in any habitable room. As with state standards, the provisions do not apply to detached single-family residential uses. The city's airport noise abatement programs apply the standard to detached single-family dwellings.

The city's building code guides building construction. The insulation provisions are intended to mitigate interior noise from outside sources, as well as sound between structural units. The provisions vary according to the intended use of the building, e.g., residential, commercial, industrial. The regulations are intended to achieve a maximum interior sound level equal to or less than the ambient noise level standard for a particular zone, as set forth in the city's noise ordinance.

Nuisance Noise

Nuisance noise is intermittent noise that exceeds the city's ambient noise levels or is otherwise deemed a nuisance. It is addressed primarily through enforcement of municipal code provisions described in this section.

BUILDING MECHANICAL EQUIPMENT

In addition to standards and regulations contained in the noise ordinance, mechanical equipment noise (e.g., roof top air conditioners) is regulated by the building code (LAMC Section 91). The city's building and safety department administers and enforces the code as it applies to noise relative to both installation and maintenance of equipment.

DISTURBING THE PEACE

In addition to the noise ordinance, Los Angeles Municipal Code Section 41 contains several disturbance of the peace provisions that are enforced by the police department. These include regulation of noise from theaters, construction activities, devices used to emit music, miniature golf courses (including unduly loud talking) and "loud and raucous" noise. The latter probably is the most commonly requested noise enforcement provision because it relates to general public nuisance, e.g., loud parties. California Penal Code Section 415 also authorizes local police departments to enforce noise relative to public nuisances, including intentional noise making.

The street sales (vendor) ordinance (LAMC Section 42.00) is enforced by the police department. It prohibits "loud, boisterous, raucous, offensive or insulting" activity associated with the sale of goods or services, including solicitation for sight-seeing tours.

CITY PARK FACILITIES

Los Angeles Municipal Code Section 63.44 regulates use of recreation and parks department facilities. Park rangers and other recreation and parks department staff enforce regulations that include restrictions on use of sound amplification systems within parks and regulation of concert uses of park facilities. In addition, the recreation and parks department designs its facilities, locates activities within park sites, enforces park use hours and has operational policies for individual sites that are intended to minimize potential noise and activity impacts on surrounding neighborhoods.

BARKING DOGS

The animal regulation department administers the barking dog noise ordinance (LAMC Section 53.63). It investigates written complaints and issues warning notices to owners of properties on which barking dogs are located. If the problem continues, a hearing is set before an animal regulation department hearing officer who considers testimony and attempts to resolve the problem. Dog licenses can be revoked and the owner required to remove the animal from the site if the problem continues.

COMMERCIAL VEHICLES

Engines of large commercial vehicles (six tires, gross weight of 10,000 pounds or more when empty) are not permitted to be operated at night in any manner deemed disturbing to residents of dwelling units, including residential hotels (LAMC Section 80.36.3). The prohibition is enforced by the police department and applies to parked as well as moving vehicles.

EMERGENCY VEHICLES

It is operational policy of the city's fire and police departments to limit use of sirens and horns, as practical, when emergency vehicles travel past noise sensitive uses or through noise sensitive areas.

Automotive Vehicles

The noise most commonly experienced throughout the city is produced by automotive vehicles (cars, trucks, buses, motorcycles). Traffic moving along streets and freeways produces a sound level that remains relatively constant and is part of the city's minimum ambient noise level. Vehicular noise varies with the volume, speed and type of traffic. Slower traffic produces less noise than fast moving traffic. Trucks typically generate more noise than cars. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity and honking of horns. These noises add to urban noise and are regulated by a variety of agencies.

Management of automotive vehicle and associated noise is within the jurisdiction of federal, state and/ or local authorities. This section reviews the jurisdictional authority of vehicle noise management relative to the City of Los Angeles.

Vehicle Emissions

Vehicle noise emission standards are promulgated by the federal Environmental Protection Agency (Title 49, Code of Federal Regulations Parts 190 et seq.). The Federal Highway Administration (FHA) of the Department of Transportation has authority to enforce noise standards pertaining to licensed interstate vehicles with a gross weight of over 10,000 pounds, providing the enforcement authority has been authorized "curbing" (i.e., police) authority. The FHA in the Los Angeles region (headquarters in Riverside County), does not have curbing authority. State and local jurisdictions may adopt the Environmental Protection Agency regulations without amendment in order to enforce the regulations. However many cities, including Los Angeles, have not done so because noise emissions, as described previously and below, can be enforced locally as nuisance noise under other authorities.

Street Noise

Occupants of buildings are protected from traffic noise and vehicle related noise by a number of local land use, building construction and noise mitigation measures. Separation of land uses through general plan and zoning classifications traditionally has provided one of the best means of reducing noise impacts. Early land use practices and zoning designated commercial and industrial uses along highway corridors. This provided buffer uses between highways and residential areas. Construction of freeways that cut through existing communities, introduced traffic noise impacts into previously protected neighborhoods.

Modern building construction noise insulation and air filtration (air conditioning) standards contained in the city's building code generally are sufficient to mitigate noise impacts associated with city streets and ambient noise. The code also requires that outside factors, such as nearness to freeways or highways, be assessed in establishing noise insulation requirements for a particular building. The city's noise ordinance (Municipal Code Section 111 et seq.) and noise element provide minimum ambient noise levels that are correlated with land use zoning classifications. The ordinance regulates excessive noise generated by individual vehicles and incidents including noise from radios, horns, alarms, sound amplification equipment and other vehicle equipment. It also regulates hours of construction equipment operation and rubbish truck collection. These sections of the ordinance are enforced by the police department. Other noise regulations and noise mitigation procedures are contained in the municipal code and environmental review guidelines. The slower a vehicle travels, the less noise it generates. Therefore, speed limits, especially on local streets, reduce traffic noise impacts on adjacent uses. Together, the zoning and other statutes and provisions establish the city's standards and guidelines for vehicle related noise management.

The California Department of Motor Vehicles has jurisdiction over vehicle noise emissions within California. California Motor Vehicle Code Section 23130 establishes vehicle noise limits for moving vehicles, including interstate trucks that operate on streets, highways and freeways within the state, and regulates noise impacts on adjacent land uses. The provisions are enforced by the California Highway Patrol and local law enforcement agencies, such as city police.

Trucks tend to generate greater noise than cars. Certain types of trucks are prohibited by the state from traveling on certain state highways due to safety considerations. Freeways serve as the primary truck freight haul routes. Within the city, trucks are allowed to travel on streets except where prohibited by state regulations or by weight or height limits, such as on bridges, in tunnels and on some mountain or substandard streets. Because trucks can travel on most streets and highways in Los Angeles, truck noise can impact all areas of the city. Areas especially impacted tend to be those that are located adjacent to industrial and warehouse sites. Truck traffic impacts, including noise, are such a problem in the port community of Wilmington that the Wilmington-Harbor City community plan (adopted 1989) recommends that certain major highways within the community be designated as truck routes and that trucks be discouraged from using other streets.

Freeway Noise

By the late 1960s, freeways were a major source of noise throughout the state. Entire communities were impacted, especially at night, by the steady hum or roar generated by fast moving traffic. In 1973-74 state and federal agencies, in response to the 1969 National Environmental Policy Act, adopted formal policies and criteria for construction of noise barriers to mitigate impacts. In California, the responsibility for freeway and highway noise management was assumed by the California Department of Transportation (Caltrans). As a part of the nationwide highway noise abatement effort, Caltrans instituted a noise management program to reduce impacts from existing and new freeways on residential, school and other noise sensitive uses.

The program utilized noise barriers (sound walls) and/or building modification methods. The noise barrier program was the most publicly visible of the methods used. By 1996 over 150 miles of the nearly 210 miles of walls nationwide had been constructed in California, including more than 115 miles of walls in Los Angeles County. Sound walls typically are eight to fourteen feet in height and are installed between the freeway and adjacent homes or other impacted uses.

Where sound walls alone cannot reduce interior sound to acceptable levels, buildings sometimes are modified by adding or improving air conditioning, acoustical glass and/or other noise insulation features. Such abatement measures primarily are applied to schools. By 1996, the retrofitting program had been almost entirely completed for impacted schools located within the city's boundaries.

In addition, new freeways, such as the Glenn Anderson Interstate 105 Freeway (formerly called the Century Freeway), which opened in 1993, are constructed with noise mitigation features. These include walls and earth berms, freeway design (e.g., locating freeways in trenches) and conversion of some adjacent, potentially impacted properties to freeway compatible uses. The noise mitigation measures for both existing and new freeways has contributed significantly to reduction of ambient urban noise and has reduced direct noise impacts on adjacent uses and neighborhoods.

Rail Systems

Noise from rail systems is localized, impacting immediately adjacent communities. This section reviews noise and vibration management relative to rail systems within the city.

Railroads

JURISDICTIONAL AUTHORITY

The city cannot regulate transcontinental or intrastate trains operating within its borders. It has the authority to regulate land use as long as its determinations do not conflict with or infringe upon state or federal authority. Management of rail system related noise is within the jurisdiction of federal and/or state authorities. For example, the Federal Transit Administration (FTA) requires that all rail systems that receive federal funding must be constructed and operated in accordance with its specifications; the Federal Rail Administration (FRA) sets and enforces safety standards, including regulation of noise emissions within locomotive cabs, and requiring that train horns be a minimum of 96 dBA at 100 feet in front of a moving train; the National Environmental Policy Act (NEPA) requires federal agencies to incorporate environmental protection and enhancement measures into projects that are financed in whole or in part by federal funds (including loans). The FTA has promulgated noise and vibration impact assessment and mitigation guidelines for use by rail authorities for preparation of environmental impact reports for federally funded rail projects. Rail operations in Los Angeles are centered around Union Station and the east Los Angeles rail yards.

NOISE ISSUES

Union Station is located in the Central City North community of Los Angeles, adjacent to El Pueblo de Los Angeles Historic Monument. The train yard adjacent to the station bounds New Chinatown and extends to Taylor Yard, which is adjacent to the communities of Glassell Park and Cypress Park (Northeast community plan area). The station and yards serve both passenger and freight trains. Noise from Union Station and the adjacent yards largely is buffered from residential uses by manufacturing, commercial, office and park (Elysian Park) uses. In the early 1990s use of the yards by Metrolink trains generated public concern. An advisory committee was formed. The committee prepared a community compatibility study that recommended noise management measures.

Noise from freight train activities associated with industrial and warehouse uses and around the Los Angeles-Long Beach harbors generally is buffered from adjacent uses by surrounding industrial, warehouse and commercial uses. Overall improvement in train equipment and servicing methods has contributed significantly to reduction in noise impacts. However, some residential neighborhoods near active rail lines are impacted by noise from intermittent passing trains and associated rail and truck activities.

ALAMEDA CORRIDOR PROJECT

Construction of the six-lane, 20-mile project began in 1997. The corridor extends from the ports of Los Angeles and Long Beach, though south and central Los Angeles to rail yards in the cities of Vernon and Commerce, interconnecting rail lines with regional truck systems. It is intended to increase the efficiency of movement of freight and expand rail capacity within the Southern California region. This is to accommodate the expected tripling of Pacific rim (Asia, North and South America and other Pacific nations) trade over the next quarter of a century. The project will consolidate some 90 miles of railroad tracks and eliminate approximately 200 at-grade street crossings. A 30-foot deep trench paralleling ten miles of Alameda Street is planned from the rail yards near downtown Los Angeles to the Artesia Freeway (Route 91) in the city of Compton. Consolidation of rail lines will reduce noise impacts by reducing the number of freight haul lines and by providing buffering of new lines, thereby eliminating or significantly reducing noise associated with freight trains.

New Rail Systems

TRAIN AND LIGHT RAIL NOISE

The Southern California Regional Rail Authority (SCRRA) is a quasi-state agency that operates the Metrolink commuter train system. Since it is regulated by federal interstate commerce laws, it is exempt from local regulations. If a train system utilizes existing rail rights-of-way, it is deemed categorically exempt under the California Environmental Quality Act (CEQA) environmental assessment and mitigation procedures. Metrolink trains utilize existing rail corridors, station areas and rail yards. Therefore its system generally have been deemed categorically exempt under CEQA. However, SCRRA voluntarily attempts to abide by local noise regulations and responds to noise complaints.

Other new rail systems are under the authority of the Los Angeles County Metropolitan Transportation Authority (MTA). The MTA serves commuter and short haul public transit passengers within the greater Los Angeles metropolitan area. As a quasi-state agency it is exempt from city noise laws. However, the MTA attempts to comply with the local noise regulations and to achieve the federal standard of 85 dBA within 50 feet of a habitable dwelling. The MTA uses comprehensive noise and vibration criteria that varies according to land use. This has enabled it, in some neighborhoods, to achieve even more restrictive sound emission levels than are set forth in the city ordinances and/or federal guidelines.

Before rail lines are constructed or new systems installed, significant potential noise and vibration must be identified and mitigation measures assured in accordance with federal and state environmental impact regulations (NEPA and CEQA). New rail systems and equipment are designed to comply with noise standards established by the FTA, the American Association of Railroads and the Public Utilities Commission relative to car, engine and track design, horns, auxiliary equipment, train operation, sound of wheels at curves, crossing signal bells and other system associated noise. Significant noise mitigation has been achieved by both MTA and SCRRA through replacement of existing rails and wood ties or construction of new tracks with continuous or seamless (not jointed) welded rails. Antilock braking systems prevent ‘flat spots’ on train wheels which, in the past, caused them to bump and clank whenever the flat spot and rail came into contact. New car and wheel system design and noise dampening devices also reduce external noise. These and other features have eliminated the vibration, noisy “click-clack” sound and other noises commonly associated with traditional railways.

The MTA Blue Line and Metrolink lines generally utilize existing rights-of-way that bound existing industrial, institutional, commercial, open space and other nonresidential areas, thus minimizing new noise impacts on residential uses. Securing of rail rights-of-way has enabled the MTA to, in some cases, create open space, park and recreational buffers along rail lines, further reducing noise impacts on adjacent residential areas. Noise impacts are virtually nonexistent for the MTA's Green Line light rail system because it is located almost entirely within the Glenn Anderson Freeway.

New development on properties adjacent to rail lines must comply with the city's building code insulation provisions. Along with zoning setbacks, building insulation generally assures adequate noise mitigation relative to adjacent rail lines.

The MTA and SCRRA have attempted to be responsive to neighbors. After the Blue Line began to operate between downtown Los Angeles and Long Beach, residents in the Long Beach area complained to the MTA of the sound of wheels on rails at one section of the line. People also complained about the loudness of the train horns. These complaints prompted the MTA to hire a noise consultant to investigate. Based on the consultant's recommendation, the MTA installed quieter horns, retrofitted cars with additional dampening fixtures and materials, modified the car design, ground the rails and constructed a sound barrier at the noise complaint site, thereby achieving lower noise levels. The redesign of the cars and other modifications benefitted properties along the entire Blue Line route and are being applied to other MTA light rail systems. Similar complaints about the loudness of Metrolink horns resulted relocation of the horns from the roofs to the undercarriages of the trains, significantly reducing noise impacts.

Partially in response to community concerns, the planned Metrolink maintenance facility at Taylor Yard (Glassell Park and Cypress Park in northeast Los Angeles) was designed to reduce noise impacts. New technology and facility design enabled entire trains to be serviced without having to separate cars or locomotives. This virtually eliminated noise from separation of air hoses and coupling and uncoupling of cars.

Nevertheless, the community experienced noise impacts due to increased activity in the yards. This resulted in neighborhood demands for mitigation of rail yard noise and for development of more compatible uses along the eastern portion of the property. A study group was formed in the early 1990s. It was comprised of the representatives of the American Institute of Architects, community groups, property owners and operators, public agencies, elected officials and other entities who evaluated the potential use of parcels adjacent to and within the eastern portion of Taylor Yard. The team recommended community oriented commercial and other neighborhood compatible development of some parcels along the north side of Taylor Yard. The recommendations were used in conjunction with the revision of the Northeast community plan, which was underway in 1998.

SUBWAY NOISE AND VIBRATION

MTA's Metro Rail Red Line subway is partially completed. A single subway line operates between Union Station and Western Avenue (in the Wilshire community). Other lines are under construction, including a branch to the San Fernando Valley via Vermont Avenue and Hollywood Boulevard (Hollywood community). Because it is an enclosed underground system, noise impact concerns have been minimal, except relative to construction activities. Subway construction was granted a variance from the city's noise ordinance construction hours to enable tunneling 24 hours a day, in accordance with conditions of the variance. Any construction activities must otherwise comply with the noise ordinance.

In the Hollywood area the broadcast industry raised concerns about vibration and noise, especially during construction, relative to the proposed tunnels below television, radio and recording studios. This resulted in the hiring by the MTA of a consultant to evaluate potential noise and vibration impacts and to propose mitigation measures as a supplement to the environmental impact report for that segment of the system. The measures issued in 1989 included some subway realignment. Depth of the subway tunnels, track engineering and vibration dampening measures are expected to reduce or eliminate impacts of vehicle generated vibration on uses located above the tunnels when the system becomes operational.

Tunneling under the community of North Hollywood began in 1996 and resulted unanticipated problems, including construction noise and vibration impacts on sensitive uses, e.g., recording studios. The MTA reanalyzed its planned train operations and environmental conditions. In response to its findings, the MTA adjusted its noise and vibration criteria, modified the track supports and offered to modify some buildings that contained sensitive uses. The measures are intended to eliminate any significant above ground noise and any vibration impacts, as measured relative to the high ambient noise levels associated with the area.

Aircraft and Airports

Airport and heliport noise is localized, affecting communities immediately adjacent to the facilities. However, the intensity and intrusiveness of jet aircraft noise has resulted in such noise becoming a major local concern. The primary issue raised during the hearings and public discussion relative to the city's first Noise Plan (1975) was the issue of aircraft noise, especially noise impacts on communities adjacent to the Los Angeles International Airport (LAX). Issues also were raised in 1975 about noise associated with heliports and the Hollywood-Burbank Airport (now called the Burbank-Glendale-Pasadena Airport). In the interim since the 1975 plan was adopted many changes have taken place that have enabled authorities to better address noise issues relating to airports. However airport noise remains the primary unresolved noise issue facing the city. This section reviews noise management of aircraft and airports (including heliports) within the city. It addresses this issue relative to the five airports that are located within or immediately adjacent to the City of Los Angeles: LAX, Van Nuys, Burbank, Santa Monica and Whiteman airports.

Jurisdictional Authority

Management of aircraft and airport related noise is within the jurisdiction of federal, state and/or local authorities.

FEDERAL

Under federal statutes, safety and national defense have primacy over noise abatement. The Federal Aviation Act of 1958 vested the Federal Aviation Administration (FAA) with exclusive authority over air safety, management and control of airspace and movement of aircraft through airspace. Local jurisdictions and local airport authorities have no direct control over airspace or air traffic control, which are safety issues under the authority of the FAA. The FAA determines landing and departure routes for public and private airports and heliports and sets construction and operational standards to assure safety. Federal authority preempts state and local authority over aircraft operations, including aircraft noise emissions, aircraft flight patterns and airport use.

STATE

Enforcement in California of federal airport regulations is delegated to the California Department of Transportation (Caltrans) and is administered by the Caltrans Aeronautics Program (CAP). CAP sets noise guidelines for local airports. In addition, the state is responsible for regulation of airport related land use and has established noise insulation standards. It has delegated authority over land use regulation largely to local governments.

LOCAL

Land use compatibility with airport uses is largely within the authority of local jurisdictions, as long as actions do not conflict with or infringe upon federal and state authority. Local governments cannot regulate flight hours, flight patterns or operational procedures. Where the local government is also the airport proprietor, it may adopt noise abatement measures affecting aircraft operations only with the express authorization of the FAA. The city has mapped airport hazard areas around the Van Nuys (VNY) and LAX airports and established procedures to regulate land development consistent with federal safety regulations (LAMC Section 12.50). Land use within flight path hazard areas, both within and outside of airport boundaries, must comply with height, glare and other safety considerations established by the FAA.

AIRPORT LAND USE COMMISSION

State law (Public Utilities Code Section 21670 et seq.) requires creation of county airport land use commissions (ALUCs). The ALUCs advise local jurisdictions concerning coordination of airport and land use planning for adjacent geographic areas in order to achieve orderly expansion of airports, reduction of community exposure to excessive noise and elimination of safety hazards associated with airport operations. The ALUCs prepare and adopt comprehensive airport land use plans (CLUPs) that "provide for the orderly growth of each public airport and the area surrounding the airport" within the ALUC's jurisdiction and protect the welfare of the surrounding residents and general public. The plans are based upon airport layout plans, as accepted by the CAP, or locally adopted airport master plans. The ALUC plans anticipate airport growth for a period of 20 years.

An ALUC reviews those sections of a city's general plan (e.g. community plans and airport plans), as well as proposed plan amendments, specific plan ordinances and development permit requests that pertain to airport hazard and noise impact areas in order to determine consistency with the CLUP. Local authorities may overrule an ALUC's determination.

State law provides for the Los Angeles County Regional Planning Commission to act as the ALUC for Los Angeles County. The county's 1991 CLUP contains a CNEL of 65 or 70 dB noise exposure contours for each airport in the county. The CLUP "Land Use Compatibility Table" provides guidelines for establishment of particular uses in areas exposed to a CNEL of 60 or more dB noise impacts. The City of Los Angeles noise ordinance emission standards are consistent with the 1991 CLUP guidelines. Revision of the county's CLUP was initiated in 1997.

CITY OF LOS ANGELES

Pursuant to the city's planning and zoning code, aircraft landing fields are allowed by right in the M2 (light industrial) and M3 (heavy industrial) zones. In all other zones they are authorized by conditional use permit issued by the city planning commission (LAMC Section 12.24.B.1) or, on appeal, by the city council. Most heliports are not located in M2 or M3 zones. The three airports within the city boundaries (LAX, VNY and Whiteman) generally are zoned in the M2, M3 or PF (public facilities) zones.

In 1998 Los Angeles World Airports, the city's airport authority, was preparing master plans for LAX and VNY. The plans are limited by the FAA to land use considerations, including intensity of development. However, changes in airport land use must be approved by the FAA. The city is prohibited from closing an airport or reducing the intensity or type of aircraft activity without FAA approval.

Because Whiteman Airport is a county facility, it is legally exempt from municipal zoning laws. However, as a matter of policy, the county attempts to comply with city zoning laws and land use procedures.

SUMMARY

In general: federal authority is over airspace and safety, including aircraft noise standards; state authority is over airports, including airport noise standards, and enforcement of airport safety (except where preempted by federal authority); and local authority is over operations and land use (except where preempted by federal and state authority).

Regulations And Programs

A variety of regulations and programs guide and assist local airport authorities in achieving federal and state noise standards.

ENVIRONMENTAL ASSESSMENT

The 1969 National Environmental Policy Act (NEPA) and 1970 California Environmental Quality Act (CEQA) require that environmental impacts, including noise impacts, be evaluated. NEPA requires that mitigation measures be considered in project implementation. CEQA requires that mitigation measures be incorporated into the project to avoid or minimize significant impacts to the maximum extent feasible. Proposed new airports, including heliports, are required to submit environmental statements as a part of their permit applications. Master plans, zone changes, reconfiguration of airport uses (including runways) or other significant projects are discretionary actions that trigger the environmental assessment and mitigation procedures. All official environmental review documents are subject to public review and comment.

FEDERAL AVIATION REGULATIONS PART 36 (FAR PART 36)

Congress in 1968 granted the FAA authority to implement and monitor airspace regulations, including regulation of aircraft noise. The FAA in 1969 promulgated "14 Code of Federal Aviation Regulations Part 36" (FAR Part 36) establishing maximum sound emission levels for new aircraft and phasing out of noisier aircraft. Subsequent amendments classified fixed-wing aircraft into three noise impact categories, with Stage 1 applying to the oldest and noisiest aircraft engines and Stage 3 to the newest and quietest engines. New fixed-wing aircraft built in the United States were required to comply with the Stage 3 standards. After January 1, 1986 commercial fixed-wing aircraft were to comply with the Stage 2 standards. Stage 1 aircraft were phased out of use at civilian airports by 1990.

To comply with FAR Part 36, all new commercial passenger airplanes are designed to reduce engine noise to a minimum feasible level. Lighter and stronger composite materials and more streamlined design have reduced needed engine power, thereby reducing engine noise emissions. New technological advances are anticipated to further reduce fixed-wing aircraft engine noise in the future.

CALIFORNIA AIRPORT NOISE STANDARDS

California Airport Noise Standards (California Code of Regulations Title 21, Section 5000 et seq.) were adopted in 1970. They are administered by the Caltrans Aeronautics Program (CAP). Under the standards, civilian airports, including heliports, that are deemed to be a "noise problem airports" are required to meet a community noise equivalent level (CNEL) of 65 dB at airport boundaries by January 1, 1986 (FAR Part 36) or to seek a variance from CAP. Noise problem airports that were unable to eliminate noise incompatibility within the established time frame were permitted to seek and renew variances. Variances provide extensions of time for development of plans for compliance within a reasonable period of time.

CNEL is a noise measurement scale applied over a 24-hour period to all noise events received at the measurement point. It is weighted more heavily for evening and night periods in order to account for the lower tolerance of individuals to noise during those periods. Noise is greater at the source (airport runway) and diminishes as the distance between source and the receptor widens. The CNEL measurement is expressed as a contour line around the noise source.

The California Noise Standards contain procedures for implementing noise and land use compatibility requirements. They establish systematic methods for measuring noise levels and addressing noise problems and define incompatible noise sensitive uses, e.g., residential dwellings (including mobile homes), schools, hospitals, convalescent homes and houses of worship. An interior noise level of a CNEL of 45 dB is the standard for all noise sensitive uses.

Counties are authorized under the noise standards to issue a resolution declaring that a civilian airport within its boundaries is a "noise problem" airport, based upon receipt of noise complaints and other noise impact data. Once so identified, the airport becomes subject to the California Airport Noise Standards, which are enforced by the county. The county is required to validate the noise contours. Airports identified by the county as noise problem airports are to reduce noise problems (i.e., incompatibility) through a variety of suggested strategies, including reconfiguration of airport land use, modification of airport flight paths, rezoning, land acquisition and other abatement measures. The airport's comprehensive land use plan is submitted to the county for review and adoption. The county submits the plan and quarterly reports (documenting the contours and incompatible land uses within the contour areas) to the CAP. The CAP reviews the reports and approves the plans.

Five airports are within or adjoin the city (Exhibit A). The Los Angeles County Board of Supervisors has deemed three of the five, LAX, VNY and Burbank, to be noise problem airports. All three airports submit quarterly reports with contour maps depicting CNEL of 65 dB contours (Exhibits B-D) to the county and prepare noise abatement programs. They currently operate under noise compatibility compliance time extension variances. Santa Monica and Whiteman airports are not considered noise problem airports because significant airport related noise is contained within the airport or surrounding airport-compatible land use (Exhibits E and F).

AIRPORT NOISE AND CAPACITY ACT OF 1990 (FAR PARTS 91 AND 161)

The Airport Noise and Capacity Act of 1990 (14 Code of Federal Regulations [subsequently recodified as 49 U.S.C. 47521 et seq.]) established FAA authority over most airport noise management, preempting state and local authority. The Act sets procedural requirements that must be met before noise regulations can be enacted for an airport. It is implemented by "14 Code of Federal Aviation Regulations Part 161" (FAR Part 161), which establishes a program for reviewing airport noise and access restrictions on the operations of Stage 2 and Stage 3 aircraft. In addition, FAR Part 91 establishes procedures for phasing out of large (over 75,000 pounds) Stage 2 aircraft and for reducing noise emitted by Stage 2 aircraft. The goal is to phase out most Stage 2 commercial fixed-wing aircraft from airports by December 31, 1999. Any proposed new Stage 3 noise mitigation measures must be authorized by the FAA. Prior to 1990, airports could impose more stringent standards than were contained in federal regulations. The Act allows noise ordinances already in effect, such as the Van Nuys Noise Abatement and Curfew Ordinance, to remain in effect, i.e., to be "grandfathered".

FEDERAL AVIATION REGULATIONS PART 150 PROGRAM (FAR PART 150)

In 1979, passage of the Aviation Safety and Noise Abatement Act made matching funds available for noise abatement. "14 Code of Federal Aviation Regulations Part 150" specifies how abatement and prevention measures may become eligible for the funds. The program is popularly known as "FAR 150 program." The Burbank Airport Authority and LAWA are participating in the FAR Part 150 program relative to the LAX, VNY and Burbank airports.

To qualify impacted areas for noise abatement or prevention funds, an airport authority must submit noise exposure contour maps and prepare a noise compatibility program (NCP), as defined by FAR Part 150. The maps are to identify CNEL of 65 dB or greater noise exposure contours for current and projected exposures. The NCP is to include a description of how citizens, local jurisdictions and affected agencies will participate; an airport land use compatibility plan; measures to prevent introduction of additional incompatible uses within the noise exposure areas; and detailed proposals for achieving and maintaining compatibility, e.g., reduction of incompatible land uses, airport reconfiguration, modification of flight procedures, sound proofing or other noise management measures designed to reduce impacts on existing surrounding noise sensitive uses. To guide noise impact assessment and prioritization, FAR Part 150 provides a land use compatibility table. It is comparable to the state guidelines and the guidelines contained in this noise element (Exhibit I). The FAA may deny an NCP or approve eligibility for funding for all or part of a proposed NCP.

The FAR Part 150 program in 1998 began requiring evidence that local authorities are preventing the introduction of new noise sensitive uses within noise impact areas and stopped providing funds for noise abatement for incompatible uses introduced after January 1, 1998. The changes are intended to encourage promulgation and enforcement of local land use compatibility measures.

CALIFORNIA NOISE INSULATION STANDARDS

The interior noise standard to be achieved by abatement programs is specified by the California Noise Insulation Standards (Building Code Title 24, Section 3501 et seq.). It sets interior noise levels of 45 dB in any habitable room, averaged over a 24-hour period. The standard is applied, per the California Airport Noise Standards, to all "sensitive uses" pursuant to the airport noise compatibility program.

LOCAL NOISE COMPATIBILITY PROGRAMS

In addition to federal noise abatement and prevention funding, local airport authorities may establish their own programs. LAWA has established an abatement program relative to LAX. It is independent of the Part 150 program. In addition, local airports and jurisdictions have sought to reduce through land use changes and other noise management approaches.

Helicopters

PLANNING COMMISSION AND FIRE DEPARTMENT PERMITS

Aircraft, helicopters and heliport noise and safety considerations are within the regulatory authority of the state and federal governments, as described previously. However, cities have authority over certain land use and specific safety considerations.

In the 1960s the Los Angeles City Planning Commission (CPC) was given the responsibility (LAMC Section 12.24) for authorizing heliports, including heliports[1] used only in emergency situations. The permits are conditioned, based on potential impacts identified during the permit review process, including environmental review and public hearings. The conditions define and regulate the use of a specific heliport. If noise or other potential land use related problems appear unsolvable, the CPC can deny the permit. Permits can be revoked if noise impacts prove greater than anticipated or conditions of approval are not observed. The county's airport land use commission is required by state law to confirm the local heliport permit before final authorization can be considered by the Caltrans Aeronautics Program. The FAA determination of conformity of a heliport and its flight paths to FAA guidelines occurs prior to CPC consideration. Therefore, the determination is part of the documentation provided by the applicant to the CPC. If the state, FAA or the city fire department determine that a proposed or existing heliport is unsafe, the CPC's permit becomes moot.

The fire department has the authority to deny or revoke use of a private or public heliport if it determines that a facility does not meet city safety requirements (e.g., failure to maintain a heliport in a safe condition, existence of trees or other obstructions in the landing or departure paths or improper maintenance of wind socks and lighting).

In 1974 all new buildings over 75 feet in height were required by the city to provide emergency helicopter landing facilities (LAMC Section 57.18.11). The authority to approve such uses was assigned to the fire department. The new law resulted in a substantial reduction in the number and type of permits considered by the CPC. Permits for banks and hospitals became the most common requests because banks needed to transfer paper records on a daily basis and hospitals needed heliports for transfer of patients and materials. Requests for commuter and passenger service operations generally were denied by the commission. However, such requests were rare because of the availability of helicopter operations at local airports.

In 1978 the fire department was authorized to approve "infrequent" helicopter landings in any zone (LAMC Section 12.22-A.6). Such landings may occur only twice a year at sites within specified single-family (RA, R1) and commercial (C1, CR) zones. Infrequent landing permits are to accommodate occasional events such as educational programs and movie filming.

Commission hearings for heliports typically generate community concern regarding noise impacts. To minimize noise impacts, the CPC generally limits the use (e.g., bank records transfer only), hours

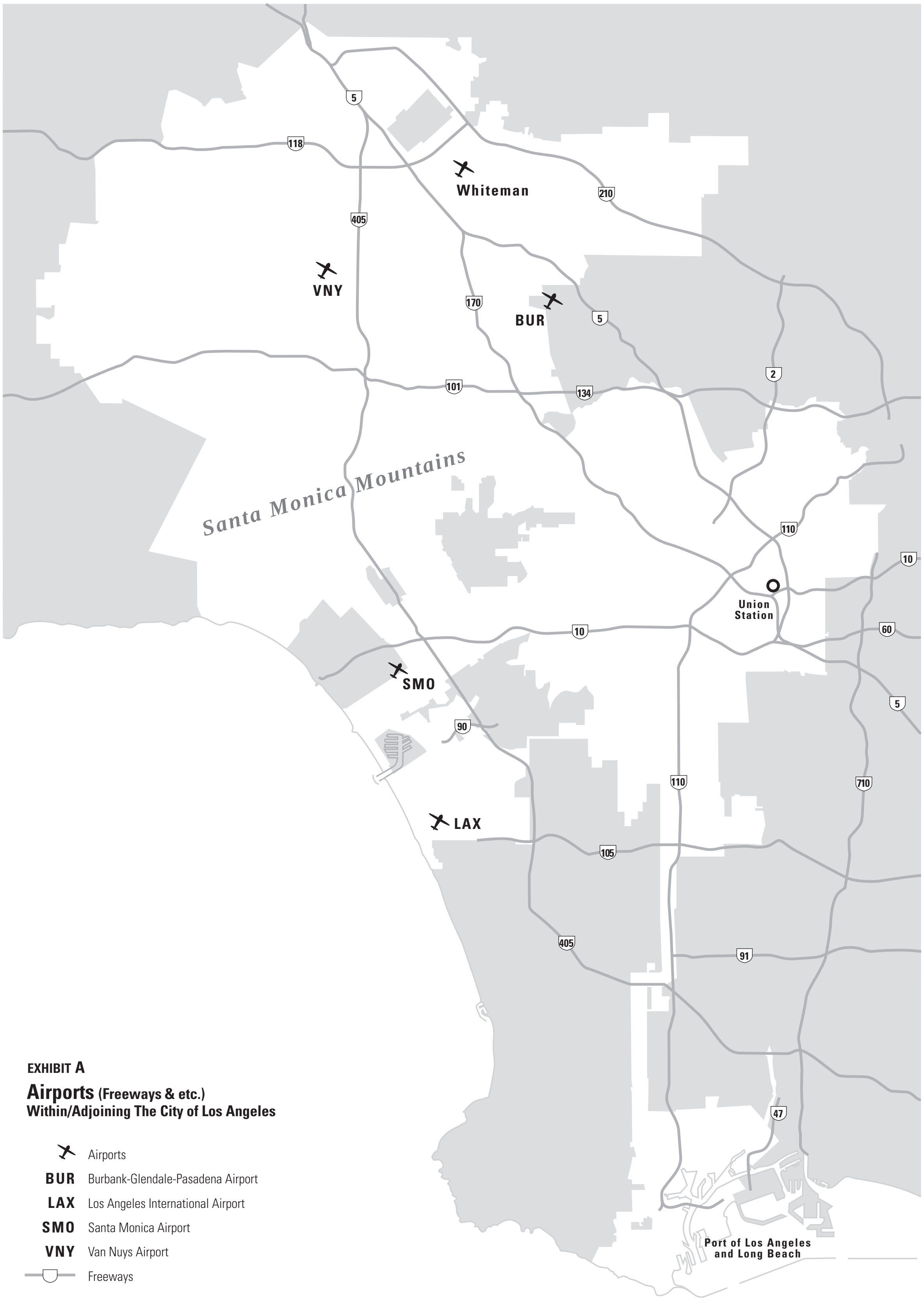

EXHIBIT **A**

Airports (Freeways & etc.) Within/Adjoining The City of Los Angeles

✈	Airports
BUR	Burbank-Glendale-Pasadena Airport
LAX	Los Angeles International Airport
SMO	Santa Monica Airport
VNY	Van Nuys Airport
─◯─	Freeways

Source: Proposed Transportation Element of the General Plan, Los Angeles City Planning Department, 1997.

Prepared by the Transportation Unit • City of Los Angeles Planning Department • Citywide Graphics • January, 1998

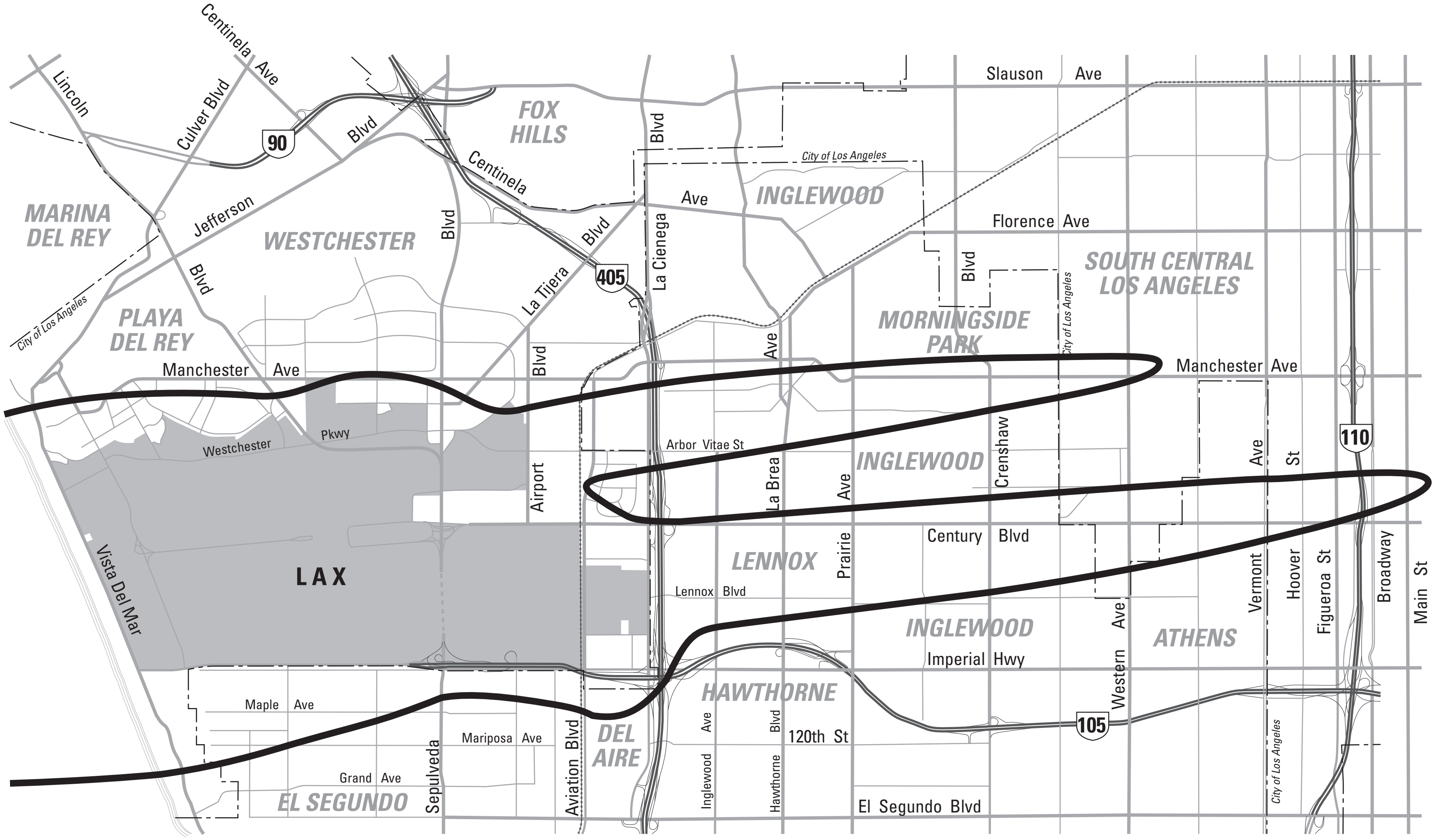

EXHIBIT B

Los Angeles International Airport

Noise Exposure Contour*

━ Noise Contour (a CNEL of 65 dB)

▨ Airport Boundary

Note: Exhibit is illustrative and is not to scale.
For further information contact Los Angeles World Airports.

*Based on: (1) Fourth Quarter Monitoring Report, Los Angeles World Airports, August 13, 1997
Los Angeles World Airports, April 07, 1997
(2) City Planning Department community plan maps.

Prepared by the Graphics Section • City of Los Angeles Planning Department • Citywide Planning Division • January, 1998

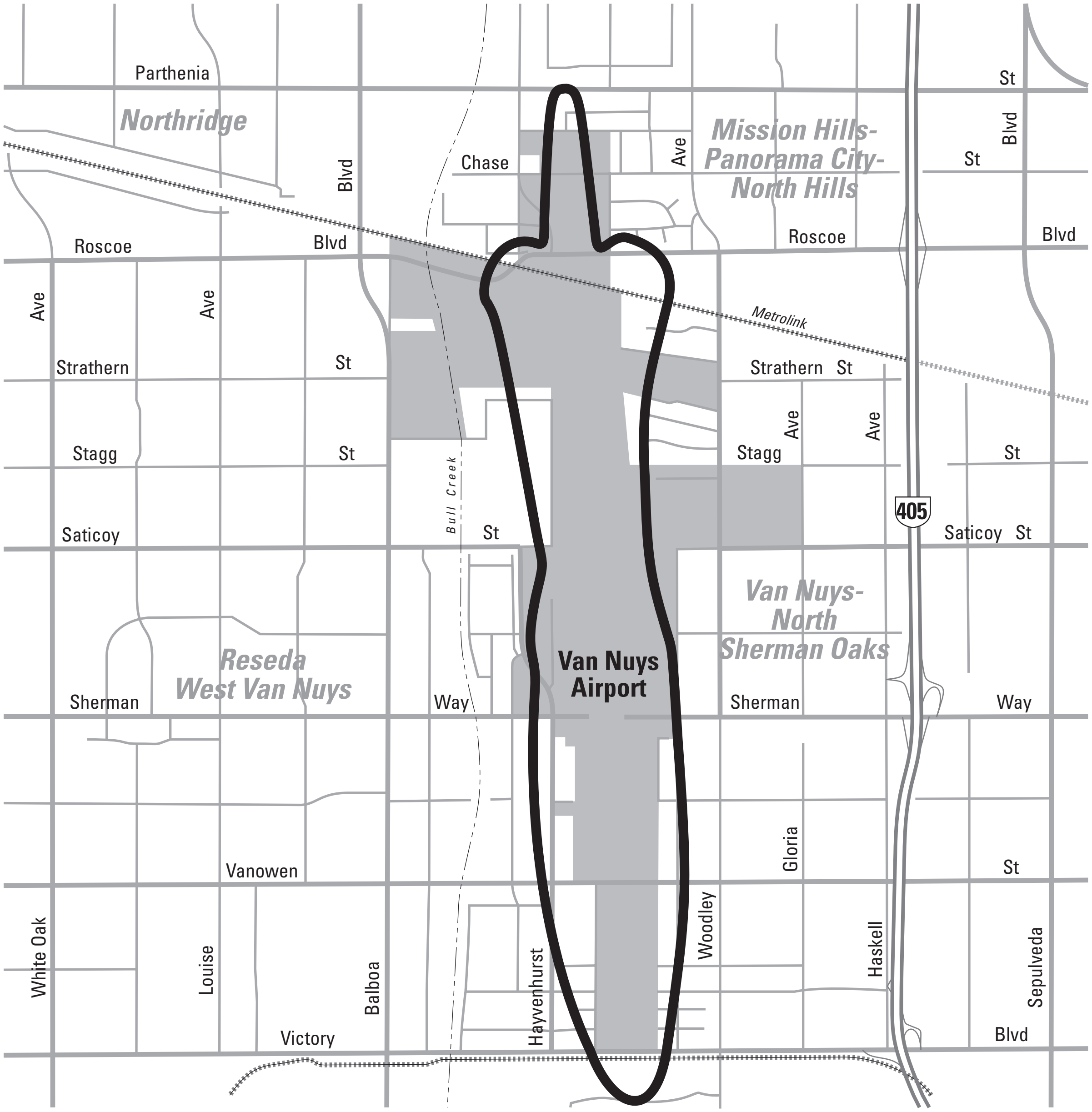

EXHIBIT C

Van Nuys Airport
Noise Exposure Contour*

▬ Noise Contour (a CNEL of 65 dB)

▨ Airport Boundary

Note: Exhibit is illustrative and is not to scale.
For current information contact Los Angeles World Airports.

*Based on : (1) Fourth Quarter Monitoring Report, Los Angeles World Airports, September 8, 1997
(2) City Planning Department community plan maps.

Prepared by the Graphics Section • City of Los Angeles Planning Department • Citywide Planning Division • January, 1998

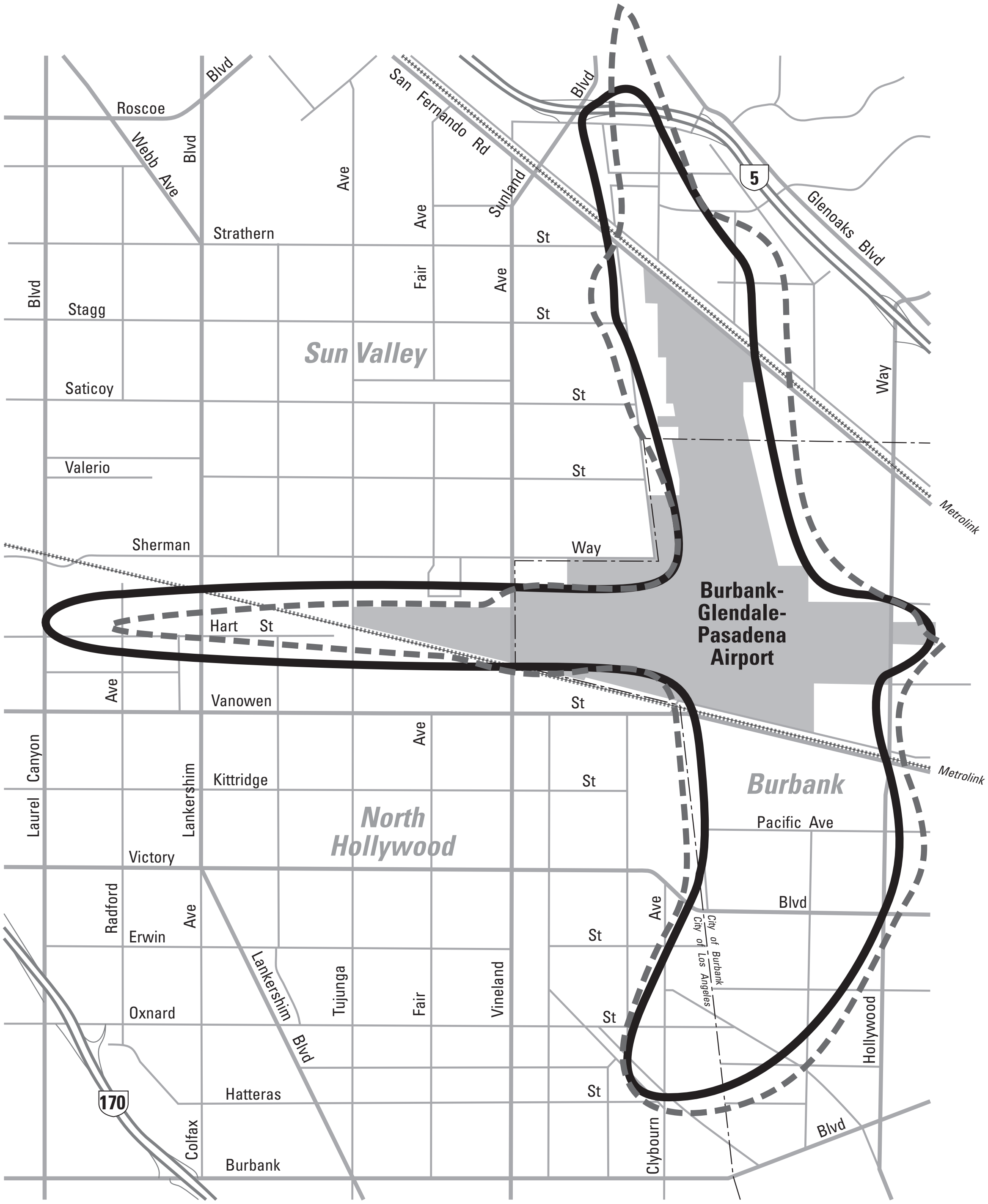

EXHIBIT D

Burbank-Glendale-Pasadena Airport
Noise Exposure Contours

▬ 1996 Noise Contour (a CNEL of 65 dB)*

╍ 2010 Projected Contour (a CNEL of 65 dB)**

▨ Airport Boundary

*Based on : (1) "Quarterly Noise Monitoring Report, at Burbank Airport, Fourth Quarter 1996", Burbank-Glendale-Pasadena Airport Authority, July 1996.
(2) City Planning Department community plan maps.

**Based on : "Environmental Impact Statement for Land Acquisition and Replacement Terminal Project," Burbank-Glendale-Pasadena Airport Authority, August-1995.

Note: Exhibit is illustrative and is not to scale. For further information contact the Airport Authority

Prepared by the Graphics Section • City of Los Angeles Planning Department • Citywide Planning Division • January, 1998

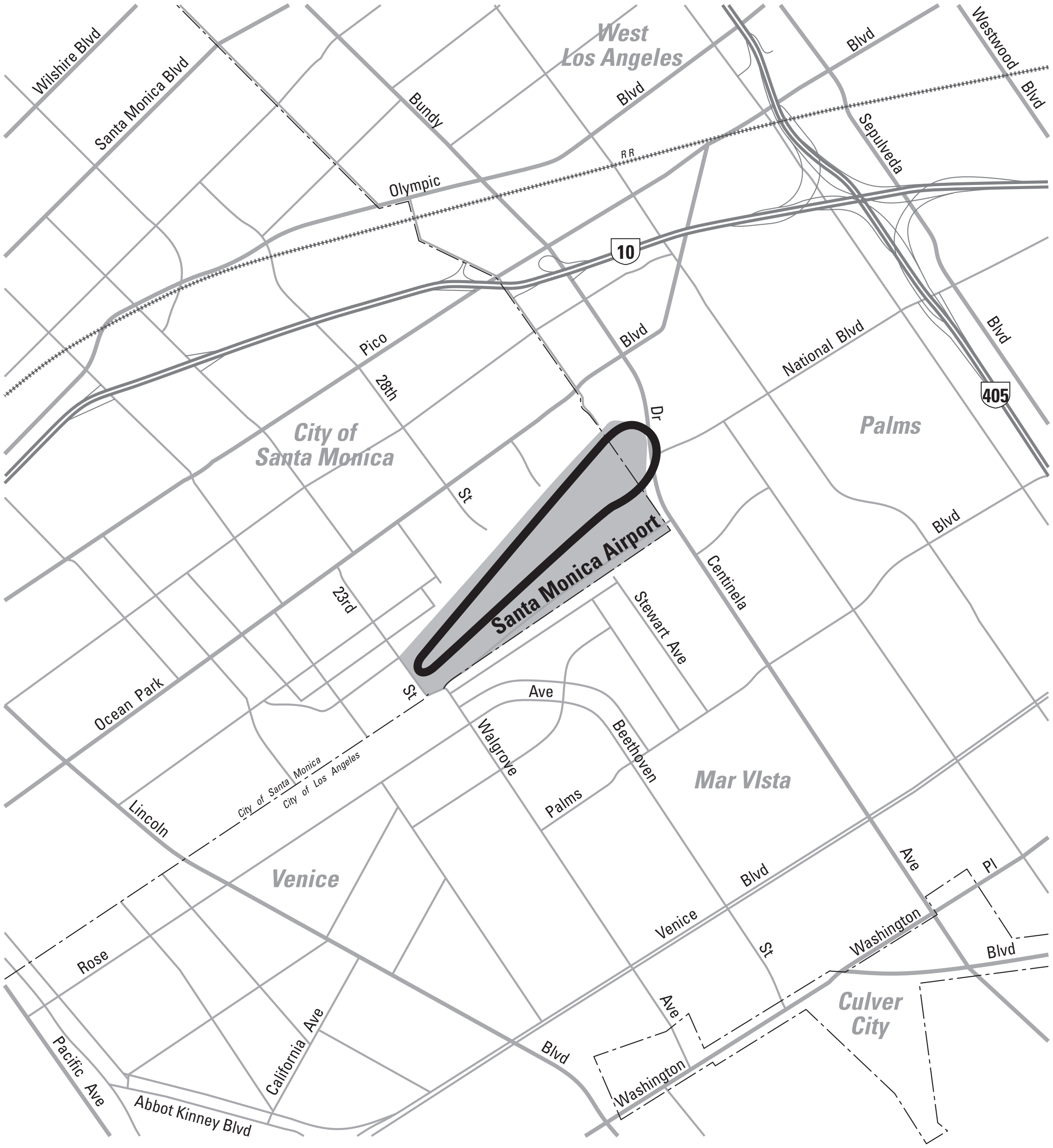

EXHIBIT E

Santa Monica Airport
Noise Exposure Contour*

■ Noise Contour (a CNEL of 65 dB)

▨ Airport Boundary

Note: Exhibit is Illustrative and is not to scale.
For current information contact the Santa Monica Airport

*Based on : (1) Santa Monica Airport Noise Management Office, 1996.
(2) City Planning Department community plan maps.

Prepared by the Graphics Section • City of Los Angeles Planning Department • Citywide Planning Division • January, 1998

EXHIBIT F

Whiteman Airport
Noise Exposure Contour*

▬ Noise Contour (a CNEL of 65 dB)

▨ Airport Boundary

Note: Exhibit is illustrative and is not to scale.
For current information contact the County Regional Planning Department

*Based on: (1) "Los Angeles County Airport Land Use Plan", adopted 1991, Los Angeles County Airport Land Use Commission.
(2) City Planning Department community plan map.

Prepared by the Graphics Section • City of Los Angeles Planning Department • Citywide Planning Division • January, 1998

of operation and number of flights. It sometimes requires noise barrier walls and imposes landing or departure routes. However, because state and federal authority preempts that of municipalities regarding safety, flight path and noise barrier requirements sometimes have been deemed inoperative by the FAA or CAP if they interfered with flight safety. For many years the CPC imposed helicopter weight limitations because it was assumed that weight could be correlated with the amount of noise generated. It ceased imposing the condition in the early 1980s when it was advised that helicopter weight no longer had any bearing on noise emissions.

Helicopter noise, unlike that of fixed-wing aircraft, is associated with the sound generated by rotor blades slapping against wind currents, not by the aircraft engine. Improvements in rotor systems is the primary means of reducing noise generated by helicopters. By the mid-1980s requests for conditional permits for heliports dwindled to zero, largely due to the building construction recession, electronic transfer of documents, increased popularity of limousine service and increased helicopter use of airports. By then approximately 50 private heliports had been permitted within the city, apart from emergency heliports and at local airports (primarily at Van Nuys and Burbank airports).

In the 1980s noise reduction and concern about crime resulted in the support by many local communities for police surveillance helicopters, causing such use to increase substantially. In Los Angeles, police and fire department helicopters operate from existing heliports that often contain fueling, parking and helicopter maintenance facilities.

HELICOPTER NOISE

Even with noise suppression improvements, helicopter flight at 500 feet creates an audible sound that is especially noticeable at night. National "Fly Neighborly" guidelines are implemented voluntarily by most pilots, thereby reducing noise impacts, especially in the vicinity of residential neighborhoods and noise sensitive uses. For example, voluntary alternate flight routes have been requested by the FAA relative to the Hollywood Bowl and other open air theaters during summer concert seasons. In the 1980s, to reduce noise impacts on adjacent communities, local airport authorities established helicopter operational flight procedures, specific landing and departure routes, use restrictions (e.g., no flight training exercises) and restricted hours of operation. These measures, along with rotor system redesign, significantly reduced noise impacts on neighborhoods. The operational procedures were "grandfathered" as existing procedures when the Aircraft Noise and Capacity Act of 1990 was effectuated (October 1990).

Airports In The Los Angeles Area

Los Angeles International Airport is known by its FAA identifier "LAX." It is one of four airport facilities operated by the Los Angeles Department of Airports. The department adopted the business name of "Los Angeles World Airports" (LAWA) in 1997.[2] LAWA is an independent, fee supported, self-managing city agency governed by a board of airport commissioners who are appointed by the mayor and confirmed by the city council. LAWA establishes rules and regulations governing the operation its four airports.

In 1930 LAX became the city's first airport. LAWA subsequently acquired the Van Nuys (VNY), Ontario and Palmdale airport properties. LAX and VNY are located within the city's borders. Ontario Airport is located 30 miles east of Los Angeles, within the city of Ontario. The Palmdale Regional Airport is located 35 miles northeast of Los Angeles in the Antelope Valley within the Mojave Desert, near the city of Palmdale. A temporary airport terminal is located on U.S. Air Force property adjacent to the city's 17,750 acre future regional airport site. Pending development of that airport, portions of the site are used for agricultural purposes (pistachio nut and fruit orchards, grazing sheep). The Ontario and Palmdale airports are not discussed in this element.

Los Angeles International Airport (LAX)

LAX is located entirely within the City of Los Angeles. It is situated south of the Santa Monica Mountain range, within the Westchester-Playa del Rey community planning area. It bounds the cities of El Segundo and Inglewood, the county community of Lennox and the Pacific Ocean.

The airport was located in the middle of a bean field. It rapidly expanded until today it occupies an approximately 3,500 acre site. It has four lighted runways ranging from 8,925 feet to 12,090 feet in length, each of which can accommodate wide bodied passenger jet aircraft. A major contributor to the local economy, LAX is the fourth busiest airport in the United States and the world. In 1996 it served 763,866 flights and 58 million passengers and its 98 acre "cargo city" handled over 1.89 million tons of goods, 40 percent of which was international freight. Among the facilities located on LAX property are commercial and light manufacturing uses, the Centinela Hospital Airport Medical Clinic, a U.S. Coast Guard Air Station and a 200 acre El Segundo Blue Butterfly habitat preservation area.

LAX ZONING

The majority of the LAX site is classified in the M2 and M3 (manufacturing) zones, which allow airport uses by right. Commercial, light manufacturing and open space zoning around the perimeter of the site has encouraged development and retention of airport compatible uses, which serve as noise buffers between the airport and adjacent noise sensitive uses. A portion of the zoning within the airport is conditioned to limit types of use and intensity of development in order to reduce street traffic impacts and encourage compatibility with surrounding communities. Parcels along the north (Westchester) perimeter generally are required to secure planning commission or planning department site plan approval prior to issuance of building permits. This allows additional public review and ensures compliance with planning commission policy.

LAX NOISE MANAGEMENT

Following the opening of the airfield in 1928, agricultural lands surrounding the airport gradually were converted to urban uses. When jet aircraft were introduced in 1959, residents, merchants and school authorities began complaining about noise, especially noise associated with landings and takeoffs. A Sound Abatement Coordinating Committee comprised of representatives of the air transport industry, LAWA, FAA, the Airline Pilots Association and commercial carriers was formed in July 1959 to address the noise problem. Subsequently LAWA implemented the committee's recommendation that aircraft be required to maintain a straight departure course, not turning until they were over the Pacific Ocean. But noise complaints continued.

As a result of a legal action by Westchester property owners, LAWA, with the assistance of FAA funds, in 1965 began to acquire and remove more than 2,800 homes that were severely impacted by aircraft noise and to relocate approximately 7,000 residents of the homes. The program was completed in the 1980s with many of the homes relocated as a part of an affordable housing program. Twenty of the vacated homes were used for a sound insulation testing program. The program concluded that homes severely impacted by airport noise could not be adequately insulated at a reasonable cost using materials and techniques then available. The study is one of the most systematic investigations of different methods and materials applied to dwellings. It has been used by federal and other agencies for formulating insulation standards and programs.

To achieve compliance with FAA and state noise regulations, LAWA adopted (1972) a five-point program to reduce aircraft noise and diminish greater than CNEL of 65 dB aircraft noise impacts on surrounding communities. The measures included termination of airport use permits for operators who repeatedly violated LAWA's noise regulations. Nighttime noise impacts on residential areas was reduced in 1973 when LAWA instituted a preferential nighttime runway system and rerouted night landing and departures over the ocean. Following a test flight of the Concorde supersonic airplane to LAX in 1974 all supersonic aircraft were prohibited from using LAX until such time as they could meet LAWA noise standards. A 1,500 foot long concrete and landscaped earthen sound barrier was constructed in 1979 along the north side of LAX between Emerson Avenue and the Westchester Golf Course to mitigate noise impacts on the Westchester community. During the 1970s a lawsuit brought against LAWA by local school districts was settled when LAWA agreed to provide funds for insulation of schools impacted by LAX and the school districts agreed to aviation (overflight) easements.

LAX - FAR PART 150 AND LAWA NOISE COMPATIBILITY PROGRAMS[3]

The major program in the 1980s and 1990s to accomplish greater compatibility between airports and their neighbors was the FAR Part 150 noise compatibility program. In 1981, to qualify for FAR Part 150 funds, LAWA instituted a four-part study, "The LAX-Airport Noise Control Land Use Compatibility Study." The study reevaluated the feasibility of achieving acceptable indoor noise levels, the methods and materials to meet the levels and the costs involved. It established new noise identification and mitigation procedures that could be applied to homes within a CNEL of 65 dB contour. The new procedures included an aircraft noise monitoring system, which was installed to detect nighttime engine testing in maintenance areas, and a 24-hour complaint and information phone line to facilitate processing of and response to community complaints.

The study provided documentation that enables thousands of properties in the LAX noise impact area to quality for noise abatement funds. Representatives of the aviation industry, regulatory agencies and communities impacted by noise participated in the study. They assessed noise management techniques in relation to land use and recommended methods for achieving greater compatibility between LAX and its neighbors. Public hearings and workshops were conducted to help identify the scope of the study and to secure information and ideas. Committees explored different issues including helicopter noise, maintenance operations, nighttime impacts, operations of aircraft in flight and on the ground and community specific issues. Using advanced modeling techniques, airfield and aircraft operational strategies were evaluated for both noise reduction and safety. In addition, homeowners in noise impacted communities were invited to participate in a "validation" project to test noise insulation materials and methods. Of the 243 dwellings offer by owners for sound insulation testing, seven apartment buildings and 15 single-family dwellings were selected. Residents were interviewed to determine the effectiveness of insulation techniques and materials.

Data from the study resulted in establishment of geographic boundaries within which impacted jurisdictions and properties could qualify to participate in the FAR Part 150 program. The study provided the information needed to qualify and establish prioritization of properties and jurisdictions for FAR Part 150 funding and led LAWA, in 1987, to establish its own sound insulation funding program to supplement federal funding. Other noise monitoring and reduction benefits resulting from the study include: an ongoing dialogue between the community and airport authority; revision of flight and on-ground aircraft and maintenance operational procedures; acceleration of planning and redevelopment programs to reduce incompatible land uses in surrounding jurisdictions; enactment by LAWA of a requirement that aircraft using the Imperial Boulevard terminal (near the city of El Segundo) be towed between the airfield and the terminal; installation of auxiliary power units at all aircraft parking locations so that aircraft would not have to run their engines in order to maintain air conditioning levels within the aircraft between flights; proposals for redesign of runways, including a plan for maximizing use of interior runways so as to focus noise away from adjacent communities; reaffirmation of LAWA's prohibition of supersonic aircraft from use of LAX; establishment of procedures for improved pilot education concerning flight noise management procedures and new helicopter noise abatement (including requiring a 2,000 foot flight altitude); construction of additional sound barriers in Westchester and El Segundo; and a determination that recent advances in acoustical and thermal insulation materials and techniques had made retrofitting a viable alternative for some noise impacted areas and uses.

LAWA sound insulation funds were made available in 1987 to impacted jurisdictions (Los Angeles city and county, Inglewood and El Segundo). To qualify for LAWA funds a local jurisdiction must be a participant in the FAR Part 150 program. Funding for both the FAR Part 150 and LAWA programs has been expanded to accelerate noise management efforts. An estimated 29,041 uninsulated dwelling units lie within the LAX CNEL of 65 dB noise exposure area (approximately 20,051 multifamily and 8,990 single-family residential units). It is estimated that, by the year 2010, LAWA will spend approximately $245 million to soundproof more than 21,000 dwelling units and $220 million for purchase (for conversion) of incompatible uses. As of 1996, the city of Inglewood had been allocated $8 million to convert noise impacted residential properties to airport compatible uses and school districts had been allocated $21 million for sound insulation.

Between 1981 and 1996 the LAX CNEL of 70 dB noise exposure contour area had shrunk from 2.6-square miles to one-square mile, while the CNEL of 65 dB contour remained at around three-square miles. Noise impacts on surrounding communities were significantly reduced by 1986, primarily due to the phasing out of all Stage 1 aircraft, the noisiest aircraft. Virtually all Stage 2 aircraft were phased out by 1996 and all will be phased out by the year 2000.

LAWA is preparing an exterior sound transmission control ordinance to codify noise exposure contours and establish uniform procedures and requirements for sound insulation of new and existing noise sensitive uses, as defined by the California Airport Noise Standards, based on the contours. LAWA also is continuing its efforts to work with the FAA and pilots to further reduce noise impacts through flight techniques and practices. For example, a LAWA-FAA instrument based procedure recently was developed that enables pilots to readily identify the Pacific shoreline. This enables them to maintain flight paths and turning patterns that are less likely to impact the El Segundo and Playa del Rey communities.

LAX - COMMUNITY PLAN NOISE ISSUES

In spite of all these efforts, airport related noise continues to impact surrounding communities, including the Los Angeles city communities of Westchester-Playa del Rey and South Central, the cities of Inglewood and El Segundo and unincorporated areas of Los Angeles County, especially the community of Lennox. Each jurisdiction is addressing the issue of airport noise compatibility through its general planning and noise management programs.

LAX is located within the community of Westchester. To facilitate preparation of plans for LAX, the airport property was removed from the Westchester-Playa del Rey community plan. In acknowledgment of this action, Objective 7 of the 1974 Westchester-Playa del Rey District Plan calls for coordination of airport and airport related land uses to “provide adequate buffers and transitional uses” between LAX and the community.

LAX PLAN

LAWA is preparing a airport master plan that addresses the first major expansion of LAX since 1984. It will become a part of the city’s general plan and, therefore, will be considered for approval and/or adoption by the planning commission, mayor and city council, following public hearings. The primary goal of the plan is to reduce noise impacts on adjacent communities, especially residential neighborhoods, while enabling significant expansion of airport activity. The project also will address ground traffic impacts (both noise and circulation) on surrounding communities. Noise has been a major issue in the project discussions.

Van Nuys Airport (VNY)

Van Nuys Airport is owned and operated by LAWA. It is located wholly within the City of Los Angeles. It is known by its FAA identifier "VNY." VNY is situated in the center of the San Fernando Valley, north of the Santa Monica Mountain range, within the community of West Van Nuys and at the edges of the community plan areas of Mission Hills-Panorama City and Van Nuys-North Sherman Oaks. VNY is a 730-acre general aviation airport (no scheduled air carrier services). It has two lighted runways. The 8,000 foot long runway crosses Sherman Way boulevard via an overpass and can accommodate jet aircraft of up to 210,000 pounds. The 4,000 foot runway can accommodate aircraft of up to 14,000 pounds. In 1996 VNY was the busiest general aviation airport in the world and the seventh busiest civilian airport in the nation, handling over 526,433 annual flights and serving 750 based aircraft (those that lease space at the airport). In addition to airport related uses, VNY property contains a hotel, nine-hole golf course, restaurants, agricultural uses and an office supplies store.

VNY ZONING

The majority of the airport property is classified in the [Q]M2-1VL Zone. The [Q] 'Permanent Qualified' condition limits land use on specified sites to airport and airport related uses. The 1VL Height District designation limits structures to 45-feet in height. Less than 16 acres of the property is classified in the M1 and M2 (light manufacturing) zones. The remaining 59 acres lie within the airport overfly (hazard) area and are classified in the OS-1XL (open space) and A1-1XL (agricultural) zones with structures limited to 30 feet in height by the 1XL Height District classification.

Pending completion of the VNY master plan, the city council in 1993 imposed a two-year interim control ordinance to regulate airport land use changes. Subsequently the time period was extended. The ordinance requires planning department authorization for virtually all changes in use. This is to ensure that new uses will not significantly intensify airport activity, that they will be compatible with the surrounding neighborhood and that they will not preclude airport master plan actions.

VNY NOISE MANAGEMENT[4]

From 1949, when LAWA acquired the airport, to 1971, additional acquisitions led to airport expansion and enabled establishment of peripheral airport related uses to buffer airport noise from adjacent residential neighborhoods. However, continuing complaints from neighboring communities regarding noise, especially during the nighttime hours, prompted the city council in 1981 to adopt a noise abatement and curfew law (Ordinance 155,727). The ordinance prohibited airplanes that exceeded 74 dB from taking off from VNY between the hours of 11 p.m. and 7 a.m. (except as provided by the ordinance, e.g., military aircraft and in the event of an emergency); prohibited repetitive jet pattern flying and training operations; limited propeller driven aircraft activities, engine testing and use of certain runways during nighttime hours; and established penalties for ordinance violations. Fixed-wing aircraft operators subsequently were required to sign a "Quiet Jet Departure Program" agreement. The agreement required pilots to observe flight techniques and procedures designed to reduce noise impacts on surrounding communities, e.g., modification of hours and patterns for landings and departures. With the passage of the federal Airport Noise and Capacity Act of 1990, local governments and airports were prohibited from adopting new noise restrictions without obtaining authorization from the FAA. However the Act grandfathered existing local noise ordinances, including the VNY noise abatement ordinance.

In October 1982, LAWA prohibited scheduled commercial air carrier flights from using VNY. In 1985, in response to community concerns regarding potential airport acquisitions, expansion, safety and noise, LAWA established the VNY citizens advisory council to help assess community concerns and develop noise management strategies. In 1992 it prepared the VNY Part 150 program with the assistance of a steering committee, which included community representatives. It was not accepted by the FAA because the FAA deemed that the airport noise exposure maps, upon which the program was based, were unacceptable.

Voluntary modified takeoff procedures were requested of jet aircraft by LAWA in 1993 to reduce noise and enable an assessment of the effects of such measures on noise impacts. In 1994 noise monitoring was improved to provide more accurate noise contours on which to base the FAR Part 150 noise compatibility program. By 1996, VNY and FAA noise management strategies, including acquisition of land for airport related uses and phasing out of Stage 1 (the noisiest aircraft), had reduced the CNEL of 65 dB contour to an area almost entirely within the airport boundaries and surrounding industrial properties (Exhibit C). A new FAR Part 150 Steering Committee was established in 1996 to advise LAWA concerning noise issues and to recommend abatement measures.

From 1995 to 1998, in response to continuing complaints from neighbors about noise, LAWA enacted a series of noise management policies, all of which required approval of the FAA before they could be incorporated into the VNY noise abatement ordinance. These included prohibiting issuance of additional leases for Stage 2 based aircraft (July 1995), extending the curfew from 11 p.m. to 10 p.m. (May 1996) and requesting permission to apply the curfew to helicopters (March 1997). The curfew limitations and the nonaddition rule for aircraft with a noise emission level of over 77 dBA (calculated using FAA Advisory Circular No. 36-3) were authorized by the FAA in August 1997. FAA ruled that any proposed new helicopter restrictions must comply with FAR Part 161, following environmental review processes and public hearings, consistent with federal procedures. The new curfew was incorporated into the VNY noise abatement ordinance and became effective in February 1998. The nonaddition rule was under consideration by city decision makers in 1998.

VNY - COMMUNITY PLAN NOISE ISSUES

Some noise from VNY impacts adjacent communities located within the general plan community planning areas of Reseda-West Van Nuys, Mission Hills-Panorama City-Sepulveda and Van Nuys-North Sherman Oaks. The majority of the VNY is located within the Reseda-West Van Nuys community plan area. The plan was adopted in 1986. Its policies call for all new development within VNY to be accomplished under conditional use permit. This enables the planning commission and city council, on appeal, to review use change requests and, if approved, to impose conditions, including noise impact mitigation measures. The community plan designates 650 acres of the plan area for industrial use, most of which is located within or around VNY. The industrial uses provide buffers between the airport and adjacent residential neighborhoods. Some residential uses still exist within the noise contour area. The community plan was being updated in 1998.

The Mission Hills-Panorama City-Sepulveda and Van Nuys-North Sherman Oaks community plans for several decades have designated land immediately adjacent to VNY for industrial uses. By the late 1980s incompatible uses generally had been phased out and an industrial buffer had been created adjacent to the southern and northwestern portions of VNY. Both community plans were being revised in 1998.

VNY PLAN

A master plan for VNY was being prepared by LAWA, in coordination with the VNY citizens' advisory council and other affected and interested parties, in 1998. The master plan will become a part of the city's general plan and, therefore, will be considered for approval and/or adoption by the planning commission, mayor and city council following public hearings. The FAA also must approve the plan. The primary goals of the planning effort are to reconfigure on-site airport land use and modify airport use to make VNY more economically viable while at the same time reducing impacts on adjacent communities. Noise from current as well as potential future airport activities was a major issue in the master plan discussions which were taking place in 1997-98.

Burbank-Glendale-Pasadena Airport (BUR)

The Burbank-Glendale-Pasadena Airport, commonly known as the Burbank Airport and by its FAA identifier "BUR," is not within the jurisdiction of the City of Los Angeles, although a small portion of the airport is located within the city. It is owned and operated by the Burbank-Glendale-Pasadena Airport Authority, which is independent of the three cities for which it is named. Each of the cities appoints representatives to the Authority's board of directors.

BUR is located primarily within the City of Burbank, north of the Santa Monica Mountains. Small portions of BUR are located within the Los Angeles communities of Sun Valley and North Hollywood. The most westerly portion of BUR bounds the Los Angeles planning area of North Hollywood. In 1996, BUR occupied a 480-acre site and had two lighted runways in excess of 6,000 feet in length and capable of supporting 240,000 pound jets. It served over 59,000 passenger air carrier flights with nearly 5 million annual passengers, as well as over 125,000 flights by other types of aircraft (air taxi, cargo, business, private flights and a small number of military flights).

BUR NOISE MANAGEMENT[5]

When the Authority purchased BUR in 1978, incompatible uses within a CNEL of 70 dB noise impact contour totaled 385 acres. At that time, BUR was not a designated "noise problem" airport. However, the FAA and state encouraged civilian airports to reduce airport related noise impacts within their CNEL of 70 dB noise contour areas through such means as changes in land use, installation of sound insulation and changes in airport operations. To achieve this goal, the Authority in 1981 required commercial airlines to phase out their Stage 1 and Stage 2 aircraft and to operate only Stage 3 aircraft, the quietest jet air passenger carriers, by 1989. It also prohibited departures and landings of all general aviation Stage 1 and Stage 2 jet aircraft between the hours of 10 p.m. and 7 a.m. Scheduled air carriers were asked to comply voluntarily with the curfew. Most of the carriers voluntarily complied. Stage 3, freight and other private aircraft did not come under the mandatory or voluntary restrictions. The goal of only-Stage 3 passenger carriers operating at BUR was achieved ahead of schedule, in 1987.

Due to these measures, by 1986 only 83 acres of impacted land (residential and other noise sensitive uses) remained within a CNEL of 70 dB noise contour area. In 1986 the Division of Aeronautics (later called Caltrans Aeronautics Program) changed its noise impact measurement standard from a CNEL of 70 dB to a CNEL of 65 dB. This resulted in an increase in the impact area to 446 acres. By 1994, noise management measures had reduced the number of scheduled commercial airline flights to approximately a dozen during nighttime hours, with only three occurring after 6:30 p.m. In addition to the noise reduction measures, between 1985 and 1996 the total flights associated with BUR declined from 246,000 to 184,000, further reducing noise impacts. By 1996, the impacted area within a CNEL of 65 dB contour had been reduced to 373 acres.

In 1985 the Authority began preparation of its FAR Part 150 noise compatibility program. The FAA approved the program in 1989 and allocated funds that enabled soundproofing of four schools of which two were located within the City of Los Angeles. Within the CNEL of 65 dB noise contour area (Exhibit D) approximately 2,300 dwellings within Los Angeles and Burbank could be eligible for grant assistance, depending upon the availability of money from the Federal Aviation Trust Fund. In 1997 funding became available and was offered for soundproofing of 50 homes.

BUR - COMMUNITY PLAN NOISE ISSUES

In spite of all these efforts, noise from aircraft activity continued to impact Burbank and the Los Angeles community planning areas of Sun Valley, North Hollywood and the Van Nuys-North Sherman Oaks. Plans for the three planning areas generally designate land immediately adjacent to BUR for industrial uses. By the mid-1980s most of those lands had been improved with industrial uses, thereby creating buffers adjacent to the airport. In addition, revisions to the community plans between 1979 and 1996 called for additional mitigation measures to reduce noise impacts.

BUR PLAN

A final environmental impact report (EIR) for land acquisition and a BUR replacement passenger terminal was approved by the Authority in 1993. The proposed project included acquisition by the Authority of 130 acres of land for construction of a new passenger terminal and conversion of the existing terminal site to airfield related uses. The new terminal site was selected in order to meet FAA terminal and runway separation requirements. The FAA, for safety reasons, requires that a terminal not be closer than 750 feet from the center line of an active air carrier runway. The current terminal is within the runway hazard zone.

In 1993 the City of Los Angeles challenged the adequacy of the EIR. The superior court found in favor of Los Angeles and requested that the Authority prepare a supplemental environmental impact report addressing noise impacts associated with BUR's projected increased aircraft activity. The report was prepared and, in 1995, the court found that the EIR met California Environmental Quality Act (CEQA) requirements. Los Angeles appealed the finding. In 1996 the FAA completed its review of the federally required environmental impact statement (EIS) for the project and deemed that it met the National Environmental Policy Act (NEPA) requirements. In 1996 Los Angeles challenged the adequacy of the EIS. It contended that the project was for the entire airport and would result in increased airport activity and increased impacts on noise sensitive uses within the City of Los Angeles, as indicated on the project's EIS 2010 projected noise contour map (Exhibit D). The Authority contended that the project was for the terminal only and that the increase in flight activity would occur whether or not a new terminal was constructed. Lawsuits also were filed between the Authority and City of Burbank over jurisdictional, noise and other matters. In March 1998 a federal court of appeals upheld the EIS. Other litigation was pending in 1998.

Santa Monica Airport (SMO)

Santa Monica Airport, known by its FAA identifier "SMO," was established in 1919. It is the oldest continuously operated airfield in Los Angeles County. SMO is a general aviation airport (no scheduled air carriers) that is owned and operated by the City of Santa Monica and is located entirely within that city. The site is south of the Santa Monica Mountains, east of the Pacific Ocean and a few miles north of LAX. It adjoins the Los Angeles community planning areas of Venice and Palms-Mar Vista-Del Rey. The 225 acre site has a single 5,000 foot lighted runway that is capable of handling aircraft of up to 105,000 pounds. In 1994 SMO served approximately 550 based aircraft and handled over 208,000 flights annually. It has a capacity for 750 based aircraft. In addition to airport related activities, the site contains conference and meeting facilities and a large aircraft museum that displays vintage, corporate and recreational aircraft.

SMO - COMMUNITY PLAN NOISE ISSUES

In the 1990s, noise from SMO activities was not identified as a significant planning issue by either the Venice or Palms-Mar Vista-Del Rey community plans. The Penmar Golf Course in Venice adjoins SMO at the northeast boundary of the plan area, providing a partial buffer at the west end of the SMO runway. The golf course significantly mitigates noise impacts on Venice. The 1997 revised Palms-Mar Vista-Del Rey plan designates an area between SMO and Centinela Avenue for low density residential use. Footnote No. 4 indicates that the land should not be developed with residential uses as long as the airport is in operation. A portion of the area is developed with residential uses, the remainder with developed with airport related uses.

SMO NOISE MANAGEMENT

Until the 1960s SMO primarily served as a testing field for the Douglas Aircraft Company. When the company moved its operations to Long Beach, SMO expanded its operations. By 1966 it rivaled VNY as the busiest general aviation airport in the nation, reaching a peak of 374,000 flights.

With the expansion of SMO and introduction of jet aircraft in the 1960s neighbors began to complain about noise. During the 1970s the volume of flights continued to increase, as did complaints from Santa Monica and Los Angeles neighborhoods that were under or adjacent to the SMO flight paths.

Several lawsuits were filed. The courts determined that the City of Santa Monica had an obligation to take reasonable actions to abate noise impacts. In 1982 the U.S. Department of Justice advised Santa Monica that it intended to file suit, contending that Santa Monica was in violation of federal law and contracts relating to SMO operations. Santa Monica responded that it was obligated to continue airport operations in order to comply with legal commitments to the United States. As part of a preagreement, Santa Monica in 1983 adopted a revised airport master plan and noise ordinance. The ordinance included limitation of flight departures and engine start-ups to weekdays between 7 a.m. and 11 p.m. and weekends between 8 a.m. and 11 p.m. (except for emergencies), limitation of touch-and-go pattern flying operations to daytime and nonholiday hours, prohibition of all aircraft deemed unable to meet a 95 dBA (single-event noise exposure level) standard and prohibition of use of SMO for helicopter flight training. The ordinance set criminal penalties for violations. A 1984 negotiated settlement between Santa Monica and the FAA provided for SMO to operate through July 1, 2015, under certain conditions.

Provisions of the settlement included conditions that were incorporated into the Santa Monica noise ordinance (restrictions, standards and penalties), required SMO to establish aircraft noise abatement procedures and incorporated features of the new master plan (e.g., runway realignment, relocation of noise generating activities and designation of a heliport site). A main feature of the master plan was relocation of airport uses from the south (adjacent to Los Angeles) to the north side of SMO, creation of buffer zones by converting the southeast (adjacent to Los Angeles) portion of SMO to airport oriented uses (a business park) and converting other land to park and nonresidential uses. Flight patterns were established to contain noise within SMO and the Penmar Golf Course (Exhibit E). In 1990 the final phase of the master plan was implemented by the completion of the business park. Although the federal Airport Noise Capacity Act of 1990 prohibited local authorities from adopting new noise restrictions without obtaining permission from the FAA, it grandfathered existing ordinances, including the 1983 SMO noise ordinance.

In the early 1990s over $6 million in local and federal funds was expended on noise reduction measures, including construction of noise walls. Noise abatement procedures incorporating provisions of the noise ordinance and settlement were provided to aircraft operators and were revised periodically to improve noise abatement and reflect new technology and safety considerations. Procedures included restricted flight operation hours, a minimum altitude of 900 feet over the SMO vicinity for helicopters, compliance with other SMO-FAA established helicopter noise abatement procedures and specific landing and departure routes over the golf course and adjacent freeways. Operators were urged to observe additional voluntary procedures, including increased altitude for landing and departure patterns.

Noise impacts on properties within the Los Angeles and Santa Monica generally were mitigated by the various measures that were implemented following the 1984 settlement. A greater than CNEL of 65 dB noise contour generally is retained within SMO boundaries and adjacent public, industrial and commercial areas.

Whiteman Airport

Whiteman Airport has been owned and operated by the County of Los Angeles since 1970. It is located entirely within the City of Los Angeles community of Pacoima, in the north San Fernando Valley. The 184.4-acre, general aviation airport has one lighted 4,100 foot long runway that is capable of handling aircraft of up to 12,000 pounds. Whiteman primarily serves single engine, fixed-wing, propeller driven aircraft. In 1995 it served 551 based aircraft and handled over 88,000 flights.

WHITEMAN NOISE MANAGEMENT

Noise has not been a major issue relative to Whiteman. This is largely due to the fact that the majority of aircraft operations occur during daytime hours and only propeller (not jet) aircraft use the site. Noise impacts generally are contained within the airport boundaries or adjacent industrial, open space or public lands (Exhibit F).

Much of the airport is separated from residential uses by industrial, open space or public uses. The open space and public uses include county flood control and associated recreational facilities, a county communications center and a county regional fire department headquarters (including a heliport). Hilly terrain to the north of the runway provides a natural buffer.

From the 1970s to the 1990s the economic recession contributed to a reduction in airport activity and concomitant reduction in airport related noise. Flights decreased from 140,900 flights in 1989 to 88,000 in 1995. Based aircraft decreased from 655 in the 1970s to 551 in 1995. The 1991 airport master plan indicates a projected increase to 285,000 annual flights and 930 based aircraft by the year 2010. The increase was taken into account during the updating of the Arleta-Pacoima community plan and airport rezoning (1996).

WHITEMAN - ZONING AND COMMUNITY PLAN LAND CLASSIFICATION

Even though a county can preempt municipal land use law, the county worked closely with the city planning department and neighbors during the Arelta-Pacoima community plan updating project. The county supported rezoning of airport parcels so as to emphasize its desire to maintain the airport in a low intensity use and to provide land use buffers between the community and airport uses. Concurrent with the adoption of the community plan changes in 1996, the airport site was rezoned. The current zoning is mostly in the PF (public facilities) Zone, which permits continuance of the M2 Zone uses, i.e., airport related uses by right. Portions of the property along the northeast boundary are zoned as OS (open space) and [Q]MR2 (restricted light industrial). The [Q] 'Permanent Qualified' conditions limit uses generally to the MR1 (restricted industrial) Zone and require shielding of lights and other measures to protect adjacent residential uses.

Endnotes

No.	Description
1	The term "heliport" applies to all formal heliport or helistop sites. The FAA requires that all airports provide access for helicopters. Since helicopters may land on airport runways, no formal heliport facilities or locations at airports are required.
2	The official (charter) name of the airport is "Department of Airports." However, throughout this element the agency will be referred by its business name, Los Angeles World Airports (LAWA).
3-5	Detailed descriptions of legislation and programs are contained in the Regulations and Programs section of this chapter.

Chapter III — Goals, Objectives and Policies

The following goals, objectives and policies relate to noise management within the city. The "General Plan Guidelines" issued by the Governor's Office of Planning and Research (1990) advises that a general plan should contain goals, objectives, policies, programs and implementation monitoring. Goals are described as a general setting of direction, objectives as intermediate steps in attaining the goal, policies as specific guides to decision making and programs as specific means of achieving the policies. Each policy is to have at least one corresponding implementation measure.

The programs for the noise element are contained in the Chapter IV program implementation listing. Program numbers are referenced in this chapter after each policy with the notation 'P' followed by the program number.

DEFINITION OF NOISE-SENSITIVE USES: For the purposes of implementation of policies and programs contained herein, the following land uses are deemed "noise sensitive" uses: single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves, and parks.

Goal

A city where noise does not reduce the quality of urban life.

Objective 1 (Airports and Harbor)

Reduce airport and harbor related noise impacts.

Policy

1.1 Incompatibility of airports declared by Los Angeles County to be "noise problem airports" (LAX, Van Nuys and Burbank) and land uses shall be reduced to achieve zero incompatible uses within a CNEL of 65 dB airport noise exposure area, as required by the California Department of Transportation pursuant to the California Code of Regulations Title 21, Section 5000, et seq., or any amendment thereto. (**P1** through **P4**)

Objective 2 (Nonairport)

Reduce or eliminate nonairport related intrusive noise, especially relative to noise sensitive uses.

Policy

2.2 Enforce and/or implement applicable city, state and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance. (**P5** through **P10**)

Objective 3 (Land Use Development)

Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.

Policy

3.1 Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts. (**P11** through **P18**)

Endnotes

No.	Description
6	These standards are consistent with the standards proposed promulgated by the California Department of Health Services and recommended by the Governor's Office and Planning and Research "1990 General Plan Guidelines."

Chapter IV — Implementation

The following programs are intended to implement the policies set forth in Chapter III. All of the programs are ongoing city programs that are funded out of city funds or, as available, from federal, state or other sources.

An asterisk (*) indicates the program lead agency, if any.

DEFINITION OF NOISE-SENSITIVE USES: For the purposes of implementation of policies and programs contained herein, the following land uses are deemed "noise sensitive" uses: single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves, and parks.

Airports and Harbor:

P1 Continue to develop and implement noise compatibility ordinances and programs that are designed to abate airport related noise impacts on existing uses, to phase out incompatible uses and to guide the establishment of new uses within a CNEL of 65 dB noise exposure area of the Los Angeles International and Van Nuys airports and within those portions of the city that lie within a CNEL of 65 noise exposure area of the Burbank-Glendale-Pasadena Airport.

Responsible agencies: *Airport, Building and Safety and Planning departments.

P2 Noise abatement, mitigation and compatibility measures shall be incorporated into the city's general plan airport and harbor elements, including, where feasible, sound proofing of impacted sensitive uses, buffering, land use reconfiguration, modification of associated circulation and transportation systems, modification of operational procedures, conversion or phasing out of uses that are incompatible with airport or harbor uses, and/or other measures designed to reduce airport and harbor related noise impacts on adjacent communities.

Responsible agencies: *Airports, *Harbor and *Planning departments.

P3 Continue to incorporate airport and harbor noise compatibility measures into the city's general plan community plan elements for communities that are significantly impacted by airport and harbor related noise, including, where feasible, conversion or phasing out of land uses that are incompatible with airport and harbor uses, reclassification of zones, modification of associated circulation systems and/or other measures designed to reduce airport and harbor related noise impacts on adjacent communities.

Responsible agencies: *Planning, Airports and Harbor departments.

P4 Continue to encourage operators of the Burbank-Glendale-Pasadena, Santa Monica and Whiteman airports to continue implementing and improving noise management measures so as to maintain a CNEL of 65 dB contour within the airport and surrounding compatible use boundaries and so as to maintain or reduce any impacts on noise-sensitive uses located within the City of Los Angeles to a CNEL of 65 dB or lower noise level.

Responsible agencies: City Council and Mayor.

Nonairport:

P5 Continue to enforce, as applicable, city, state and federal regulations intended to abate or eliminate disturbances of the peace and other intrusive noise.

Responsible agencies: Animal Regulation, Building and Safety, Police, and Recreation and Parks departments.

P6 When processing building permits, continue to require appropriate project design and/or insulation measures, in accordance with the California Noise Insulation Standards (Building Code Title 24, Section 3501 et seq.), or any amendments thereto or subsequent related regulations, so as to assure that interior noise levels will not exceed the minimum ambient noise levels, as set forth in the city's noise ordinance (LAMC Section 111 et seq., and any other insulation related code standards or requirements) for a particular zone or noise sensitive use, as defined by the California Noise Insulation Standards.

Responsible agency: Building and Safety Department.

P7 Continue to periodically update city codes and plans that contain noise management provisions so as to address new issues and noise management changes.

Responsible agencies: Animal Regulation, Building and Safety, City Council, Planning, Police, and Recreation and Parks departments.

P8 Continue to periodically update guidelines for California Environmental Quality Act-required land development project review by city agencies.

Responsible agencies: Airports, Community Development, *Environmental Affairs, Harbor, Housing, Planning, Public Works, Recreation and Parks, Transportation, and Water and Power departments and Community Redevelopment Agency.

P9 Continue to operate city equipment, vehicles and facilities in accordance with any applicable city, state or federal regulations.

Responsible agencies: all.

P10 Continue to encourage public transit and rail systems operating within the city's borders, but which are not within the jurisdiction of the city, to be constructed and operated in a manner that will assure compliance with the city's noise ordinance standards.

Responsible agencies: City Council and Mayor.

Land Use Development:

P11 For a proposed development project that is deemed to have a potentially significant noise impact on noise sensitive uses, as defined by this chapter, require mitigation measures, as appropriate, in accordance with California Environmental Quality Act and city procedures.

Examples of mitigation measures to consider:

(a) increase the distance from the noise source and the receptor by providing land use buffers, e.g., parking lots, landscaped setbacks or open areas, utility yards, maintenance facilities, etc.;

(b) orient structures, use berms or sound walls, utilize terrain or use other means to block or deflect noise, provided it is not deflected to other noise-sensitive uses and that the barrier does not create a hiding place for potential criminal activity;

(c) require projects with noise generating components (e.g., auto repair and maintenance facilities) to have no openings in building walls that face sensitive uses;

(d) limit the hours of operation of a noise generating use;

(e) limit the use of the site to prohibit potential noise generating uses that otherwise are allowed by right within the zone classification of the project site;

(f) require that potential noise impacts associated with project construction be minimized by such measures as designating haul routes, requiring less noisy equipment, enclosing or orienting noisy equipment (e.g., electrical generators) away from noise sensitive uses, imposing construction hours that are more restrictive than those set forth in the Los Angeles Municipal Code, requiring vehicle parking and deployment activities to be separated and buffered from sensitive uses; or

(g) determine impacts on noise sensitive uses, such as public school classrooms, which are active primarily during the daytime and evening hours, by weighting the impact measurement to the potential interior noise level (or for exterior uses, e.g., outdoor theaters, to the exterior noise level) over the typical hours of use, instead of using a 24-hour measurement.

(h) other appropriate measures.

Responsible agencies: Airports, Community Development, Environmental Affairs, Harbor, Housing, Planning, Public Works, Recreation and Parks, Transportation, and Water and Power departments and Community Redevelopment Agency.

P12 When issuing discretionary permits for a proposed noise- sensitive use (as defined by this chapter) or a subdivision of four or more detached single-family units and which use is determined to be potentially significantly impacted by existing or proposed noise sources, require mitigation measures, as appropriate, in accordance with procedures set forth in the California Environmental Quality Act so as to achieve an interior noise level of a CNEL of 45 dB, or less, in any habitable room, as required by Los Angeles Municipal Code Section 91.

Examples of mitigation measures to consider:

(a) Impose project orientation and buffering measures similar to those cited in the prior program;

(b) orient the project so as to use structures, terrain or building design features (e.g., windowless walls or nonopening windows facing the noise source) so as to block or reduce noise impacts;

(c) orient interior features of the project to reduce or eliminate noise impacts on particularly noise sensitive portions of the project (e.g., locate bedrooms and balconies away from the noise source);

(d) require insulation and/or design measures, attested to by an acoustical expert, to the satisfaction of the city's Department of Building and Safety, to identify and mitigate potential noise impacts;

(e) determine impacts on noise sensitive uses, such as public school classrooms, which are active primarily during the daytime and evening hours, by weighting the impact measurement to the potential interior noise level (or for exterior uses, e.g., outdoor theaters, to the exterior noise level) over the typical hours of use, instead of using a 24-hour measurement.

(f) other appropriate measures.

Responsible agencies: Planning, Community Development and Housing departments and Community Redevelopment Agency.

P13 Continue to plan, design and construct or oversee construction of public projects, and projects on city owned properties, so as to minimize potential noise impacts on noise sensitive uses and to maintain or reduce existing ambient noise levels.

Examples of noise management strategies to consider:

(a) site or alignment selection to minimize potential noise incompatibility;

(b) orientation of noise sources away from noise sensitive uses;

(c) placement of structures between noise generators and noise sensitive receptors;

(d) enclosure of noise sources;

(e) erection of sound walls, berms or other noise buffers or deflectors, providing that they do not deflect sound to other noise sensitive uses and that the barrier does not create a hiding place for potential criminal activity;

(f) restricted hours of operation;

(g) modification of noise sources (e.g., utilizing less noisy equipment); or

(h) determine impacts on noise sensitive uses, such as public school classrooms, which are active primarily during the daytime and evening hours, by weighting the impact measurement to the potential interior noise level (or for exterior uses, e.g., outdoor theaters, to the exterior noise level) over the typical hours of use, instead of using a 24-hour measurement.

(i) other appropriate measures.

Responsible agencies: Airport, Community Redevelopment Agency, Harbor, Public Works, Recreation and Parks, Transportation, and Water and Power departments.

P14 Continue to periodically update general plan public facilities and utilities elements, taking into account existing and potential noise impacts.

Responsible agencies: Airport, Harbor, *Planning, Public Works, Recreation and Parks, and Water and Power departments.

P15 Continue to take into consideration, during updating/revision of the city's general plan community plans, noise impacts from freeways, highways, outdoor theaters and other significant noise sources and to incorporate appropriate policies and programs into the plans that will enhance land use compatibility.

Approaches to consider: rezoning, street realignment, site design, recommendations that the mayor and city council request that the California Department of Transportation, or other responsible agencies take reasonable measures to mitigate noise impacts associated with their facilities, etc.

Responsible agency: Planning Department

P16 Use, as appropriate, the "Guidelines for Noise Compatible Land Use" (Exhibit I),[1] or other measures that are acceptable to the city, to guide land use and zoning reclassification, subdivision, conditional use and use variance determinations and environmental assessment considerations, especially relative to sensitive uses, as defined by this chapter, within a CNEL of 65 dB airport noise exposure areas and within a line-of-sight of freeways, major highways, railroads or truck haul routes.

Responsible agencies: City Council, Mayor and *Planning Department.

P17 Continue to encourage the California Department of Transportation, the Los Angeles County Metropolitan Transportation Authority, or their successors, and other responsible agencies, to plan and construct transportation systems so as to reduce potential noise impacts on adjacent land uses, consistent with the standards and guidelines contained in the noise element.

Responsible agencies: City Council and Mayor.

P18 Continue to support the Alameda corridor project as a means of consolidating rail lines and improving buffering in order to reduce noise impacts on adjacent communities from railroad related uses.

Responsible agencies: City Council, Harbor, Mayor, Planning, Public Works, and Transportation departments.

Endnotes

No.	Description
6	These standards are consistent with the standards proposed promulgated by the California Department of Health Services and recommended by the Governor's Office and Planning and Research "1990 General Plan Guidelines."

Appendix A *(Not Adopted — Information Only)*

Evolution of Transportation Systems in Los Angeles:

A Context for Los Angeles Noise Issues

Automotive Vehicles

Automobile History

The first gasoline powered automobile was produced by Benz in 1885. It was a three-wheeled carriage that used Gottlieb Daimler's 1885 motorbike engine for power. The next year Daimler designed the first four-wheeled carriage. By the start of World War I a variety of gasoline powered vehicles were being produced, including Henry Ford's Model T. The new "horseless carriages" or "tin Lizzies," as they were popularly called, were scoffed at and criticized for being dangerous to horses and people and noisy nuisances. Mass production of automobiles followed Ford's introduction of assembly lines and moving conveyor belts in 1913. During the First World War inexpensive cars became readily available, rapidly displacing the horse and buggy. By 1920 Los Angeles County had become the most motorized metropolitan area in the nation with over 481,500 registered automobiles.

Los Angeles Street System

On September 4, 1781, under the authority of the King of Spain, Governor Felipe de Neve and eleven families founded el Pueblo de la Reina de los Angeles (the Village of the Queen of the Angels). The pueblo was to provide food for Spanish troops traveling between the missions of San Diego and Santa Barbara. Prior to departure de Neve drew up a plan situating the pueblo along Rio El Porciùncula (later renamed the Los Angeles River) and identifying the locations for a plaza, church, homes, farms, an irrigation system and a road connecting the pueblo with the nearby San Gabriel Mission. The pueblo's first named streets were Primavera (later named Spring) and Aliso streets.

The first Los Angeles city land use survey was prepared by U.S. army lieutenant Edward O.C. Ord in 1849, in anticipation of Los Angeles city becoming a city of the new state of California. It was prepared under contract to the city. The plan established boundaries for city-owned lands, dividing the vacant lands west and north of the central plaza into blocks and lots and with a grid street system. That was the city's first formal street map.

In 1870 the city's first engineer, Frank Lecouvreur prepared the first master plan for development of a Los Angeles infrastructure. His plan separated sewers from flood control systems and reoriented new streets in an east-west direction to facilitate the flow of rain water, thereby reducing flooding.

Introduction of motorized vehicles changed the mode of local transportation and street systems. Private cars began displacing the horse drawn vehicles during World War I, resulting in traffic hazards and vehicle conflicts. To address worsening congestion, increasing conflicts between trolleys and automobiles and a rising number of traffic accidents, especially at intersections, the private Los Angeles Traffic Commission prepared the "Major Traffic Street Plan." The plan was drafted by renowned city planners Frederick Law Olmsted, Jr. (Boston), Charles H. Cheney (Redondo Beach) and Harland Bartholomew (St. Louis), with the assistance of planning commissioner/commission secretary, Gordon Whitnall. Whitnall subsequently was appointed the city's first planning director. The plan was approved by city voters in 1924, along with bond issues to pay for a portion of the first 37.5 mile phase. Railroads and the county provided the balance of the funds. The project included the city's first bridges to separate train and automobile traffic. This increased safety and the speed of trains by reducing traffic conflicts. The city's first traffic ordinance also was drafted by the commission. It was adopted in 1925, requiring the city's first standard signs and signals.

Until recent times, establishment and construction of integrated and efficient municipal street systems was sporadic. Local governments had difficulty purchasing or exacting land for street rights-of-way. The state Subdivision Map Act of 1907 provided for dedication of land for public purposes but efforts to secure dedications met with opposition. In 1911 the state Improvement Act empowered local governments to use easements, eminent domain, assessment districts and subdivision procedures to secure streets and other infrastructure systems. To give local jurisdictions more leverage, the Map Act was amended in 1921, enabling cities to require easements for public improvements. However, efforts to exact land were challenged. Dedications continued to be voluntary or were secured through purchase following costly, often lengthy condemnation proceedings. Systematic development of the city's street system was slow until the economic depression of the 1930s.

Following the stock market crash of 1929, private financing for public infrastructure systems dwindled. Los Angeles joined other cities in successfully campaigning for a share of the state gas tax to help complete its 1924 street plan. In 1934 the state allocated a share of the gas tax funds to cities for road projects and authorized the state Division of Highways to build and maintain city roads to link rural state highways and to create a state highway system. Cities were responsible for construction and maintenance of urban streets and highways. Federal and state public works programs provided millions of dollars for construction of streets and bridges during the period of the economic depression.

But, not until 1966 did the city gain significant leverage to exact public improvements in conjunction with land development projects. In a landmark decision, *Southern Pacific Railroad versus the City of Los Angeles*, the California Supreme Court upheld the right of Los Angeles to withhold building permits for noncompliance with public dedication requirements. The decision strengthened the ability of all municipalities to secure public facilities in conjunction with new development. Local authority was further strengthened by the 1971 California Environmental Quality Act that required development projects to mitigate potential environmental impacts associated with a project, including anticipated traffic congestion and noise. The combination of regulations (Map Act, environmental and city) enabled Los Angeles to require developers to dedicate land, construct public improvements or set aside funds for improvements. This resulted in more systematic development of the street systems. By 1996, according to the city's department of transportation, there were 6,440.1 miles of streets within the boundaries of the city, including 59.4 miles of unimproved streets, 1,028.4 miles of primary arterials (major and secondary highways), 584 bridges and 652 at-grade railroad crossings.

State Highways And Freeways

The first public road in California, El Camino Real (The Royal Road), was established in 1769 by Spanish priest-explorer Father Junipero Serra and Spain's governor of California Don Gaspar de Portolá to link the California missions. The missions were constructed approximately one day apart by horseback between San Francisco and San Diego. Following California statehood in 1850, General S.H. Marlette was commissioned to "make plans and suggestions or improvements of navigation, construction of roads, railroads and canals, preservation of forests… and surveys of boundaries of the State and counties." Although the legislature failed to allocate funds, Marlette raised money and began the first survey and construction project in 1855. It established the state's first official road, the Emigrant Wagon Toll Road from Placerville, across the Sierra Nevada Mountains to Nevada. Immigrants had come streaming into California following the announcement of the discovery of gold in 1849. By 1864 almost all mountain passes were accessible by toll roads that linked mining camps and immigrant routes to towns and cities. The first traffic count in 1864 was along the Lake Tahoe Wagon Road. It recorded 6,667 footmen, 833 horsemen, 3,164 stage passengers, 5,000 pack animals, 2,564 teams and 4,694 cattle.

In the 1870s the state and federal governments began planning a highway system. It was to link federal and state roads and serve the expanding freight traffic created by the land boom following the gold rush and extension of railroads to and within California. Construction was delegated to counties, which levied tolls to pay for the roads. This resulted in a variety of tolls and a disparate road system. Anticipating the popularity of automotive vehicles, the state created the bureau of highways in 1895. The bureau's 1896 highway plan laid the foundation for the California highway system as it exists today, with many of the routes following early mission and immigrant routes. Construction of the first state highway, Route 1, partially along a Pacific coast mission route from San Juan Capistrano, via Los Angeles and Santa Barbara, to San Francisco, began in 1912. Funding for maintenance and construction of state and county roads was provided by the state's first gas tax, a three-cent tax that was approved in 1923. A 1927 one-cent gas tax assured steady revenue for construction of the state road system. In that year the state Division of Highways (DOH) was created to plan, construct and maintain the highway system.

The first California nontoll highway, or "freeway," was the six-mile Arroyo Seco Parkway (later renamed the Pasadena Freeway). It was completed in 1940, connecting downtown Los Angeles with the adjacent city of Pasadena. After World War II, an infusion of state and federal funds enabled the acceleration of highway construction. By the mid-1960s California had an efficient, integrated highway system. But growing opposition to freeway construction, demands for community participation and environmental protection and a period of economic inflation slowed system expansion. People protested that planned freeways would slice through their communities, creating physical divisions, destroying neighborhoods, contributing to unplanned growth, local traffic congestion and noise. In the 1970s public opposition halted the proposed Century Freeway in south Los Angeles, a proposed Beverly Hills Freeway and other freeways and highways in the Los Angeles area. In 1972, to address shifting priorities, the state legislature established the California Department of Transportation (aka Caltrans) to replace the DOH. Caltrans was charged with the responsibility of planning and implementing a multi-modal transportation system, including over 15,000 miles of state highways and freeways. In 1974 a voter approved tax measure for the first time allowed gas tax funds to be used for non-highway system projects and enabled implementation of an integrated transportation program comprised of a variety of transportation systems (multi-modal system), e.g., roads, highways, bus, light rail, aircraft and other transportation modes.

Until the 1970s noise was not a major consideration in transportation system planning. Although manufacturers long had designed vehicles for reduced interior noise for drivers and passengers. Early in the century municipalities began regulating use of horns on city streets and eventually regulations and standards were developed for regulating engine and tailpipe noise levels. In the 1970s, in response to growing opposition of communities to new freeways and to mitigate potential noise impacts freeway and highway system design incorporated noise reduction features. Concurrently the noise abatement programs were instituted to address noise impacts of existing systems on noise sensitive uses.

Fixed Rail Systems

Railroads

Invention of the high pressure steam engine by Richard Trevithick in 1802 revolutionized land transportation and led to the steam driven turbine engines that were used to power ships. George Stephenson built the first public steam railroad in England in 1825. This ushered in the era of railroad building around the world. Construction of the first transcontinental railroad in North America was completed on May 10, 1869 when the Central Pacific Railroad tracks were connected to the Union Pacific tracks at Promontory Point, Utah. The route linked Chicago and San Francisco by rail, enabling rapid settlement of the western frontier and stimulating a real estate boom in California that triggered construction of additional railroad lines within the state and to points east. In 1872 Los Angeles voters approved funds to help subsidize construction of a railroad between Los Angeles and San Francisco via the San Joaquin Valley. In 1876 a route from Los Angeles to Texas was completed. Southern Pacific decided to bypass Los Angeles by establishing a freight route from its yards in Colton, fifty miles east of Los Angeles, through the Cajon Pass and Palmdale, along a desert route to New Orleans. As late as 1887 railroad companies considered San Francisco a more viable city than Los Angeles as a destination and connection point for both passenger and freight lines. In that year Santa Fe established a passenger line from Chicago, via Santa Fe, New Mexico, to Los Angeles. In spite of the arduous five day trip, Santa Fe's faster trains, with their elegant Fred Harvey dining cars and Harvey Girls hostesses, helped make the Santa Fe Los Angeles line one of the most popular in the nation and to make Southern California a popular destination point for immigrants and tourists from the eastern and Midwestern United States.

By the end of World War II less polluting electric and diesel engines had replaced steam engines on major lines. But the popularity of automobiles and expansion of the trucking industry, along with rising operational costs and higher fares and freight fees, contributed to a sharp decline in the demand for rail services. Railroad companies shifted their priorities to freight services, cut passenger services and eliminated many passenger routes and operations. By the late 1960s the extinction of passenger and freight trains was predicted.

To save passenger service systems, the federal government began subsidizing designated lines. In the 1970s it established the National Rail Passenger Corporation (aka AMTRAK) as a quasi-public agency to take over operation of national passenger services. Public demand for less environmentally damaging transport and for an alternative to automobile and air transport, combined with AMTRAK's passenger train improvement program and its interfacing of passenger rail connections with bus and air transport, revived the passenger train. Concurrently, many freight rail companies formed, merged with or entered into cooperative relationships with trucking and shipping companies. By the late 1970s freight rail service had been revived by improved, more efficient equipment, especially uniform transferable cargo containers. Containers, designed to be carried by ships, trucks or trains, revolutionized the entire shipping industry.

Freight haul and AMTRAK passenger trains continue to use rail lines that cross the city. The hub for rail operations in Los Angeles is centered around Union Station (adjacent to the city's historic plaza) and the east Los Angeles rail yards. Many of the lines in the area have been in existence since the 1870s, including lines connecting the downtown with the harbor and transcontinental lines. In 1996 Union Station served five weekly or daily transcontinental passenger trains and other trains connecting Los Angeles to San Diego, San Francisco and other cities within California.

First Los Angeles Street Cars

In 1874 Judge Robert M. Widney opened the first Los Angeles street car line. It consisted of a two single open cars drawn by horses along a 2.5 mile single track beginning at the Temple Street and zigzagging down Spring to 6th Street (later extended to the Plaza and San Fernando Street). Other enterprising businessmen quickly developed competing short haul lines. One line, the Main Street and Agricultural Park Railroad, offered 308 lots in what is now Exposition Park to attract passengers. By

1885 few horse drawn cars remained. Most had been replaced by cable cars. Electric powered streetcars were introduced in 1887 by Los Angeles Electric Railway. The line went out of business in 1888 when the power plant boiler burst. In 1888 construction in Boston by Frank J. Sprague of first successful electric street car system revolutionized local transportation. Sprague's electrified trolley trains could climb steeper grades, travel faster and, because they could pull multi-cars guided by one motorman, could operate more cheaply and efficiently than conventional street cars.

Between 1890 and 1910 the city's population grew more than sixfold, from 50,395 to 319,198, fostering a period of intense competition between the street car companies. Lines were built, damaged by floods, rebuilt, bought by competitors and expanded. In 1893 General Moses H. Sherman bought out all the Los Angeles cable lines and began converting them to electrical power. Sherman was bought out by Los Angeles Consolidated Electric Railway (LACE) in 1895. In that year LACE inaugurated the first interurban trolley line. It ran between Los Angeles and Pasadena. LACE converted its remaining cable and horse car lines to electric trolley and installed handsome Pullman Company open sided cars. Although its California Car was popular, the company was unable to show a substantial profit.

Trolley competition was intense. By 1900 an estimated 72 separate trolley companies were operating in the city, carrying passengers and goods. In 1898 Henry E. Huntington, nephew of Southern Pacific railroad owner Hollis Huntington, purchased LACE and began buying up other lines throughout the region. He wanted to develop an interurban system that would compete with his uncle's company. He also was head of the Pacific Light and Power Company, which constructed the Big Creek hydroelectric plant in the Sierra Nevada Mountains in central California to power his Los Angeles Inter-Urban Railway system (L.A. Rail). As a direct challenge to Southern Pacific, he ran some of the L.A. Rail lines parallel to Southern Pacific lines, including the Los Angeles to Long Beach harbor line that opened in 1902. To encourage ridership, he hired engineers to design a new high quality, all-season wooden car with glass windows. The handsome yellow cars built by St. Louis Car Company were popular and set a national standard. Patrons dubbed them the "big yellow cars." In 1903, E. H. Harriman bought a 45% interest in L.A. Rail, eventually taking over management of the Pacific Electric Company (P&E), owner of L.A. Rail. Harriman oversaw the development of Huntington's extensive interurban P&E L.A. Rail system. The system soon was challenged by the versatile gas fueled automobiles. By 1913 the public was complaining that the P&E trolleys were crowded and noisy (compared to rubber tired vehicles), that fares were excessively high, stops inconvenient and that the trolleys were a hazard to automobiles and other vehicles.

Competition And Noise Issues

Jitneys posed the first formidable challenge to P&E's trolleys. Eager citizens purchased automobiles and entered the jitney business, providing flexible service and flexible routes with which the fixed rail system could not compete. By 1915 an estimated 1,000 jitneys plied the city's streets, drastically reducing trolley ridership. P&E reduced fares and lobbied successfully for jitney licensing and regulation, temporarily slowing jitney competition, but not affecting the public's desire for more flexible service.

Future U.S. Senator and 1924 presidential candidate William McAdoo introduced the city's first gasoline fueled buses in 1923, the People's Motor Bus Company. But Harold Huntington, who had taken over the rail company from his father, took Motor Bus to court, driving them out of business with his claim that buses were hazardous. But other bus companies were formed, again causing trolley ridership to drop. The public outcry against the noisy trolleys and their hazardous conflicts with automobiles on narrow streets and at unregulated intersections led to the adoption of the city's first street (1924) and traffic signal plans (1925) and to construction of grade separated bridge overpasses. P&E continued to add lines. Its big yellow cars experienced a resurgence in the popularity during the economic depression of the 1930s, reaching a peak of 721 operating cars in 1932. But, with an upsurge in the economy and expansion of automobile use, ridership began to decline. To stimulate ridership, P&E in 1937 ordered new, more comfortable, streamlined, stainless steel and chrome cars and painted them red. Only two were delivered before war industry needs intervened, postponing completion of the order until 1943. The shiny new cars were dubbed the "big red cars."

At 1,164 miles of track, serving 125 cities, the P&E system was the largest electric rail system in the world. Its lines emanated from Los Angeles, reaching to Santa Monica and Ventura County (west), Redlands in San Bernardino County (east) and Riverside, Corona and Newport Beach in Riverside and Orange counties (south). The busiest year for the big red cars was in 1945 when thousands of servicemen returned from the war seeking employment opportunity in Southern California. But the era of the trolleys soon was over. Rapid population and economic expansion in all of Southern California, along with construction of the first freeways and increased automobile use created too much competition for P&E. To cut its losses the company in 1946 began eliminating short shuttle lines. Diesel powered, rubber tired buses that could operate on any street further eroded the appeal of the trolleys. The Los Angeles to Long Beach line was converted from yellow cars to red cars in 1960. By then the trolley era was over. P&E continued to close lines until only the Long Beach line remained. It was closed on March 30, 1963, temporarily ending the Los Angeles commuter rail era.

First Los Angeles Subway

A 100 mile per hour elevated, electric powered monorail was proposed by the American Rapid Transit Company in 1907. The company envisioned that the line would run from Pasadena to Santa Monica. The idea did not get beyond the planning stage.

Henry Huntington envisioned a subway system and made it a reality. He purchased the rights-of-way from 4th and Hill Streets to what is now Pico Boulevard and Rimpau Avenue. In 1907 the city council approved Huntington's subway project. By 1909 the Bunker Hill tunnel for the system had been completed. Further work was halted by an economic recession.

To address increasing conflicts between the growing automobile population and the trolley system, a 1915 study for the city proposed construction of either a subway or an elevated system. It strongly recommended a subway, so as to avoid the noise and unsightliness of elevated systems like those that had been or were under construction in New York, Chicago, Philadelphia and Boston.

In 1923, the California Railroad Commission voted to allow Huntington to increase trolley fares if he would construct an underground railroad as a means of reducing trolley and auto conflicts and potential noise. Within two years Huntington inaugurated the first Los Angeles subway, the Hollywood Subway. It had two tracks, each less than a mile in length. It ran from the new subway terminal building at Hill Street (between 4th and 5th Streets), through Crown Hill to Glendale and Beverly Boulevard near First Street. There it emerged as street trolley lines, one serving West Los Angeles and the other serving Echo Park and the cities of Glendale and, eventually, Burbank. The Beverly tunnel was used by P&E until 1955 when the Glendale-Burbank line was discontinued. The Terminal Building and the tunnel still exist as reminders of Huntington's visionary effort.

Construction of an elevated ('El') line from 6th and Main Streets to the Los Angeles River near the city's birthplace, the historic plaza, was begun in 1923. It was halted when the powerful Los Angeles Times newspaper opposed the project. The Times portrayed the El as a "dirty, deafening and hideous" contraption that would destroy the visual appearance of the historic plaza and surrounding environs. To settle the issue, the city council placed two referenda on the May 1926 ballot. Proposition 8, which would have provided funding for the El, was defeated. Proposition 9, backed by the Times, was approved. It endorsed construction of a train station east of the plaza, on the site of Old Chinatown. Union Station opened in 1939.

New Fixed Rail Systems

Various measures were proposed over the next several decades for new commuter train systems but all were defeated, partially due to claims that surface and overhead systems would be noisy and unsightly. In 1959 the Metropolitan Transit Authority (MTA), a regional agency created by the state to evaluate metropolitan transit needs, proposed a new subway system from downtown Los Angeles, running east to the city of El Monte. The idea was rejected by the voters. MTA was reconstituted by the state legislature in 1964 as the Southern California Rapid Transit District (RTD). RTD was charged with the responsibility of planning, constructing and operating a regional public transit system. The system selected was a regional bus system which became one of the largest all-bus systems in the world.

Increasing congestion on highways and a heightening of interest in environmental quality, especially air quality, prompted the state legislature, in 1972, to reconstitute its transportation and highway functions into a new agency, the California Department of Transportation (Caltrans). Caltrans was directed to reduce public dependence on the air polluting, gas guzzling automobile by developing an integrated multi-modal transportation system including buses, fixed rail and aeronautics. Voters in 1974 approved a ballot measure authorizing use of gas tax monies for transportation projects other than highways and freeways. In that same year the federal Urban Mass Transit Administration allocated funds for multi-modal regional transit systems. Funds allocated to the RTD enabled preparation of alternative plans for potential rapid transit fixed rail routes.

New Subway And Light Rail Systems

In 1980 Los Angeles County voters approved Proposition A, establishing the county's first tax specifically intended to fund public transportation. The half-cent sales tax was allocated for planning and implementation of a multi-modal county transportation system, including a 150-mile rail system. Additional funds from federal, state, local and private sources, including voter supported bond measures and, in 1990, a second county sales tax, enabled system implementation.

Three new mass transit systems evolved from the initial funding: (1) an urban subway system within the boundaries of the City of Los Angeles, (2) a light rail system within the county and (3) a regional commuter train system. They were designed to interconnect with each other, with bus and shuttle lines and with airport and long distance Amtrak passenger train facilities.

To better integrate planning and management of the vast system, the state in 1992 established the Los Angeles County Metropolitan Transportation Authority (MTA), consolidating the RTD and Los Angeles County Transportation Commission (LACTC). The RTD had been responsible for operating the bus and rail systems, constructing the subway system and operating the new light rail and subway systems. The LACTC had been responsible for constructing new light rail systems. The new MTA began operating on April 1, 1993.

The MTA opened its first Metro Rail Red Line subway in 1993. It was a four-mile line between Union Station (downtown) and Alvarado Street at Wilshire Boulevard (Westlake community). It was extended to Western Avenue at Wilshire (mid-city Wilshire community) in 1996. Another segment is under construction to the Los Angeles community of North Hollywood and others are being planned to serve east and west Los Angeles.

The MTA's Metro Rail Blue Line light rail system between the Los Angeles downtown and the city of Long Beach opened in 1990. In 1991 it was extended to MTA's subterranean rail station at Flower and Seventh Streets in the city's downtown financial district. The station serves as a transfer point for the subway and Blue Line. The 20-mile east-west Metro Rail Green Line light rail system opened in 1995. Partially to reduce noise impacts, it is constructed largely within the median of the I-105 Glenn Anderson Freeway (formerly the Century Freeway). It runs from the city of Norwalk (east) to Aviation Boulevard, near the Los Angeles International Airport (west), where it becomes a grade-separated system, continuing along a 3.5 mile route to the city of Redondo Beach. Another light rail line is under construction from Union Station to the city of Pasadena.

New Interurban Trains

Concurrently with the development of the subway and light rail systems, the Southern California Regional Rail Authority established the Metrolink regional commuter train system. Metrolink quickly became operational because it used existing rail rights-of-way, thereby eliminating the need to acquire land and construct extensive rail systems. The first Los Angeles line opened in 1990, following purchase of Southern Pacific Railroad rights-of-way along a route roughly paralleling the Pacific Coast, from Union Station to San Juan Capistrano in Orange County. Metrolink lines between Los Angeles and Moorpark (Ventura County), Santa Clarita (Los Angeles County) and Pomona (San Bernardino County) opened in 1992.

Metrolink trains primarily serve commuters, thereby avoiding competition with Amtrak. They operate during weekday peak hours, with some trains operating on Saturday and midday. All Metrolink lines for southern California emanate from Union Station. Today Metrolink serves six southern California counties: Los Angeles, Ventura, San Bernardino, Orange, Riverside and San Diego. It is interconnected with other transit systems throughout the region. During the January 17, 1994 Northridge earthquake, when several freeways collapsed or were structurally damaged. Emergency expansions of Metrolink provided commuter access from Palmdale-Lancaster and other communities north of Los Angeles to areas south of the damaged freeways.

In 1997, in response to a federal mandate that Amtrak recover costs from the fare box or other means to pay for passenger lines, intrastate Amtrak lines were threatened with future closure. In response, regional coalitions were formed to devise means of assuming responsibility for lines serving their regions, including adding lines to the Metrolink system.

Train And Trolley Noise Issues

In the 1800s and the early part of the 20th century, railroad lines were built through expanses of virgin, agricultural and ranch lands. As the population and economy grew, manufacturing uses were established along the majority of rail routes within Los Angeles. Street cars serviced residential and commercial areas, much as buses do today. Noise impacts on passengers, rather than noise impacts on adjacent properties was an issue relative to the trolley system. Noise related to rail systems was a "given" of the urban environment and generally was not the subject of antinoise demands. Operation of trolleys and interurban trains primarily during daytime hours and infrequent passage of freight and passenger trains also contributed to the lack of public complaint about noise associated with railways.

Passengers complained about noise within L.A. Rail's yellow trolley cars, especially after the introduction of quieter rubber tired automobiles and buses. Rubber was installed in the new red cars to reduce noise and vibration experienced by passengers, thereby making them more appealing to riders. In the 1970s, greater public concern about the environment and health prompted promulgation of federal noise mitigation guidelines and standards. This resulted in quieter equipment and sound reducing track design.

Aircraft

Helicopters

Greek mathematician Archimedes developed a heliko or 'screw' machine around 200 B.C. to perform specific tasks. In the 16th Century Leonardo da Vinci applied the concept, using the heliko in his design of a vertical lift flying vehicle. The machine proved infeasible due to inadequate power to lift the craft. In 1907, Frenchmen Paul Cornu and Louis Breguet constructed and flew two vertical lift machines called "helicopters." The 1915 Peteroczy-Karman helicopters, which had to be tethered to the ground and could not maneuver horizontally, were used during World War I to monitor enemy military activities. In 1939 Igor Sikorsky produced the first practical helicopter that could be flown and maneuvered by pilot operated controls. By 1941 he had developed a mechanism that enabled pilots to control a helicopter's pitch and roll, thereby increasing its practical use. The Sikorsky became the first mass produced helicopter, proving its versatility during World War II. Bell Aircraft introduced the first commercial helicopter in 1947. It was powered by piston engines and was slow, noisy and vibrated so badly that it was unpopular for use in passenger travel. The introduction in the 1960s of gas turbine engines suitable for helicopters, enabled construction of lighter machines and a quieter and smoother flight. Until the 1970s the turbine engines proved impractical because they experienced frequent, recurring and expensive maintenance problems. A variety of technological advances in the late 1960s and early 1970s revolutionized helicopter technology, including stability augmentation, which improved the pilot's ability to control and maneuver the craft; solid state avionics, which reduced the size and weight of components (replacing the bulky tube radios with lighter equipment); and more reliable twin turbine engines, which provided power redundance for added safety. The improvements decreased vibration and noise levels, increased passenger comfort, decreased maintenance and reduced noise impacts on the surrounding environment. With the improvements, use of helicopters for transportation, commercial and other civilian uses increased dramatically. Early application included use of helicopters for rescues, fire fighting and surveillance. In 1962 the Los Angeles City Fire Department acquired its first helicopter. It was used for dropping water and chemicals on targeted brush fire areas. Following the 1963 collapse of the Baldwin Hills Dam, the helicopter was used in dramatic rescues of stranded and endangered victims. The success of the operation convinced the city to purchase of a fleet of helicopters for emergency services. During the 1960s and 1970s emergency and private heliports were established throughout the city. Noise impacts were reduced by siting of facilities, flight path orientation and change in helicopter design.

Airplanes

The first successful flight of a powered, heavier-than-air craft was in 1896 by J.P. Langley whose unmanned Model No. 5 flew three quarters of a mile along the Potomac River. But it was Orville and Wilbur Wright's successful flight of the first piloted plane, a biplane, at Kitty Hawk, North Carolina in 1903 that launched the air age. Publicity flights and establishment of the first flying school by Glenn Curtis in 1907 and flight contests and air races in Europe and North America heightened public interest in flying machines. Aircraft production was accelerated during World War I when the small aircraft were used for surveillance and aerial fighting and began to be used for carrying mail and small amounts of freight, as well as for pleasure and daredevil exhibition flying. Following the war, more powerful gasoline fueled engines enabled construction of planes that could fly faster and greater distances. Soon planes were able to fly what was considered a phenomenal 200 miles per hour.

In 1927 Charles A. Lindbergh, in his Ryan NX-211 monoplane The Spirit of St. Louis, broke the U.S. transcontinental record by flying from San Diego to Long Island in 21 hours and 20 minutes with only one stop. He then flew on to Paris in 33 hours and 39 minutes, the first solo, nonstop flight across the Atlantic. His transatlantic flight caught the imagination of the public and generated increased interest in air travel. By the 1930s biplanes had been replaced for commercial and military uses by larger, faster, more versatile and more aerodynamic monoplanes.

The first jet plane, the Heinkel He-178, was produced in Germany in 1939. However, during World War II conventional propeller or “prop” planes like the DC-3 remained the primary transport and passenger aircraft. Technological advances were accelerated by wartime demands, resulting lighter planes that had greater range and speed and were more efficient and comfortable. By the 1950s jet airliners were being used for commercial flights. Not until the 1960s, with the advent of the jumbo jet with its expanded seating capacity, greater passenger comfort and reduced fares, did air passenger service become popular in the United States. In the interim the turbo props dominated the civilian market with their economical fuel consumption in carrying heavy loads over short hauls and their ability to land in difficult terrain and on short air fields. They were especially popular in rural and Third World areas.

Jet aircraft by the late 1960s had reduced the transatlantic flight time to six hours. The Anglo-French supersonic Concorde cut the time in half with its cruise speed of Mach 2, twice the speed of sound (approximately 1,350 miles per hour). The Concorde’s maiden flight was in 1969. It entered commercial service in 1976. As of 1998 the single Concorde craft was the only supersonic plane in service but, due to its noise, it was barred from most airports in the United States. By the 1990s jet planes were the dominant commercial and military craft. Introduction of jet aircraft resulted in noise impacts on surrounding neighborhoods and communities. Smaller piston engine and propeller planes remained popular for private and business use and sports and generated little or no significant noise impacts on adjacent communities.

Most of the airports in the Los Angeles area initially were established within vast expanses of undeveloped or agricultural land. In some cases the airports began as test fields associated with aircraft manufacture. Communities grew up around the sites to provide homes and services for aircraft plant employees who did not complain about airport noise. With the advent of jet aircraft and transformation of surrounding neighborhoods to nonairport related populations, noise began to be considered a nuisance.

Los Angeles International Airport (LAX)

The Los Angeles Chamber of Commerce in the early 1920s recognized that the fragile airplanes, then considered a novelty, were the beginning of a new transportation era. Because federal law at that time prohibited use of federal funds for development of airports, the chamber lobbied the city to establish a municipal airport, publishing a survey (1926) suggesting 13 possible airfield sites. After assessing terrain, wind conditions and other factors of 28 sites, the city selected Mines Field (formerly called the Inglewood Site), a 640-acre bean field that had an emergency dirt air strip. When voters turned down a bond issue for purchase of the land, the city negotiated a ten-year lease, with option to buy, and began preparing three runways for the September 1928 National Air Races. At the conclusion of the races, at which Lindbergh was the main attraction, Los Angeles took over Mines Field and created the Department of Airports (DOA) to manage it.

The airfield was established as a general aviation facility. Its few buildings and a control tower served small, single-engine planes. The first permanent runway was constructed in 1929. It was 2,000 feet long and served as the landing site in August 1929 for the Graf Zeppelin. In 1930 the field was officially dedicated as the Los Angeles Municipal Airport and the lease was extended for 50 years. Voters were reluctant to fund additional improvements since the Glendale Grand Central Airport and Burbank United Terminal (later Lockheed) appeared to provide adequate facilities for what was widely viewed as a passing fad. One disgruntled critic filed a lawsuit demanding that the lease be voided on the grounds that it was illegal to lease an airport without approval of the electorate. The state supreme court upheld the lease.

While the public may have been skeptical, the aircraft industry was not. It quickly established manufacturing facilities near the Municipal and Santa Monica airports. Douglas and Northrop opened plants in 1932. North American and other manufacturers followed. By 1937, 2,300 skilled workers were employed in the aircraft industries in the area. In the meantime air passenger travel had become popular and larger aircraft, such as the Douglas DC-3s, had been developed as passenger planes. Determining that the Glendale and Burbank airfields were not adequate for the new planes, TWA, American, Western and Pan American airlines agreed to make the Los Angeles airport their base if the city would make necessary improvements. Some improvements, including construction of a new runway, were made possible by a federal Emergency Relief Administration grant through the federal Works Progress Administration (WPA). WPA subsequently declined to provide funds because the site was not owned by the city. That problem was resolved when title was acquired in 1937. Between 1937 and 1939, WPA and bond monies enabled construction of runways and other facilities and improvements. The board of airport commissioners was created in 1940 to manage the DOA and in 1941 the name of the field was changed to the Los Angeles Airport.

During World War II the airport was used for military purposes. In 1943 the five major passenger airlines signed leases transferring their operations to the site. In anticipation of passenger air expansion, an airport master plan was prepared in 1944. After the war, southern California emerged as the center of the national aircraft industry with major activity taking place around the Los Angeles and Santa Monica airports. Passage of the city's 1945 airport bond issue by an overwhelming 5-to-1 majority enabled acquisition of 2,000 acres of land and construction of massive terminal facilities and major runways. Airport activity was shifted west of the original site to its present location.

The five airlines began operating at the airport in 1946, making it a major passenger terminal for the region. The following year voters approved a charter amendment making the DOA a self-managing city agency, independent of the mayor and city council and with control over its own finances. The airport commission, appointed by the mayor, quickly acted to create a regional system and to expand the airport into a world class facility. In 1950 the commission renamed the facility the Los Angeles International Airport, better known by its Federal Aviation Administration identifier LAX. The first runway overpass of its kind, the Sepulveda Boulevard overpass, was completed in 1953, enabling the extension of the two main runways above the boulevard to accommodate jet traffic.

In January 1959 American Airlines began the first jet service between New York and Los Angeles. A new terminal and the first permanent passenger facilities for LAX were completed in 1961. With the advent of jet aircraft, significant noise problems began to be experienced by neighboring communities due to jet overflights and increased airport activity. The DOA was made self sufficient by a 1963 charter amendment that allowed it to issue its own revenue bonds without having to secure voter approval. It immediately embarked on a program of diversification and expansion and began to address noise impact issues. In 1965 and 1966 the first air freight terminals were opened to accommodate an increasing demand for freight services. In anticipation of the 1984 Los Angeles Summer Olympic Games, airport passenger facilities were upgraded, new international and domestic terminals were constructed, other terminals were renovated, automobile circulation was enhanced by a new second level roadway and other facilities were added or renovated. The airport department (now calling itself Los Angeles World Airports, or LAWA) in 1998 was preparing a master plan for LAX, of which noise management is an important consideration.

Van Nuys Airport (VNY)

Metropolitan Airport was established as a private general aviation field on October 1, 1928. Three factories, six hangers and a control tower were added in 1929. In 1942 it was purchased by the federal government for use as a military base. Los Angeles acquired the airport in 1949 for one dollar with the proviso that the California Air National Guard could remain on the site. With the completion of the Sherman Way overpass in 1957 the city renamed the airport the Van Nuys Airport. The Sherman Way extension provided VNY with a runway that could accommodate jet aircraft. Introduction of jet planes resulted in increased noise impacts on adjacent communities. Acquisitions enabled expansion of airport operations and provision of noise buffers between aircraft activities and adjacent communities. By 1971 VNY had become the busiest general aviation airport in the nation. In 1997 LAWA was preparing a master plan for VNY, in part to address noise issues.

Burbank-Glendale-Pasadena Airport (BUR)

When United Airport opened in 1930 it was the nation's first "multimillion dollar airport," boasting five 3,600-foot runways and related facilities. By 1934 the airport served more than 98,000 passengers a year and was the main terminal for the Los Angeles area. In that year its name was changed to Union Air Terminal. The Lockheed aircraft company, which owned an adjacent manufacturing facility and airfield, purchased the site in 1940, combining the two sites and using them for the production of B-17 bombers, P-8 fighters and Hudson bombers during World War II. The original site had been used by pilots, including North Hollywood resident Amelia Earhart, to test planes purchased from Lockheed. In the 1950s air cargo and commuter flights began using BUR. Subsequently commuter and distance operations were expanded, providing a convenient alternative to LAX. With increased aircraft activity came increased noise impacts on adjacent communities.

When Lockheed announced its intention to sell the airport for conversion to other uses, the state Division of Aeronautics and FAA evaluated the facility and determined that it was important to maintain the site in airport use. To do so, the state legislature in 1976 authorized formation of an airport authority to purchase and operate BUR. The cities of Burbank, Glendale and Pasadena entered into a joint powers agreement to form the authority, which was independent of the three founding cities. Los Angeles and the City of San Fernando declined to join. Each of the three members appointed three representatives to serve on the authority's board of commissioners. The board convened in 1977, formally inaugurating the Airport Authority. In 1978 the Authority purchased the airport from Lockheed with funding from the FAA and from revenue bonds issued by the Authority. The airport was renamed the Burbank-Glendale-Pasadena Airport, retaining its FAA identification call letters of BUR. The Authority's recently approved development plans are under challenge from surrounding jurisdictions, including the City of Los Angeles, in part due to noise impact issues.

Santa Monica Airport (SMO)

In 1919 the City of Santa Monica established Clover Field on a leased a portion of a barley field. Many of the private pilots who used the field were associated with the new Hollywood motion picture industry. The Douglas Aircraft Company moved to Santa Monica in 1922 and began building military aircraft, using the airstrip for test flights. With the increasing demand for airfields and expanding needs of Douglas, Santa Monica purchased 158 acres of land in 1924 for airport expansion. It was at the Santa Monica plant that Douglas began manufacturing its popular DC series of planes. In 1934 the DC-3 became the first successful mass produced plane for commercial passenger service. Growth of jobs at the plant generated a housing boom, resulting in residential development around SMO.

On the eve of World War II, the army leased the airport for army air corps and military purposes, returning it to Santa Monica in 1948. In the late 1950s Douglas shifted its primary manufacturing operations to Long Beach because SMO could not provide a long enough runway to accommodate large jet aircraft. By the 1960s, SMO rivaled VNY as the busiest general aviation airport in the nation, reaching a peak of 374,000 flights in 1966. With increased aircraft activity and surrounding land uses, noise became an increasing issue. Mitigation of impacts has been accomplished by a variety of measures, including changes in flight paths, airport use and configuration and surrounding land uses.

Whiteman Airport

Whiteman Air Park was established in 1946 as a private airfield. It was used primarily for training, business and recreational purposes. The County purchased the site in 1970 and renamed it Whiteman Airport. Noise issues have not been a major issue relative to the airport. Recent land use and zoning changes were made to assure minimal airport impacts on adjacent residential uses.

Note: additional information about history, noise issues and noise management programs is contained in the noise element text.

Exhibit G: Glossary of Terms and Acronyms

ALUC: county airport land use commission.

Ambient noise: background or existing noise level. The composite of noise from all sources near and far in a given environment, exclusive of occasional and transient intrusive noise.

Based aircraft: aircraft having legal contracts with the airport authority for use of airport property for a specific number of days. Typically the contracts are in the form of leases.

BUR: Burbank-Glendale-Pasadena Airport.

Caltrans: California Department of Transportation.

CAP: Caltrans Aeronautics Program, formerly called the Division of Aeronautics. A division of Caltrans.

CEQA: California Environmental Quality Act of 1970.

CLUP: Comprehensive (airport) Land Use Plan of the county Airport Land Use Commission.

CNEL (Community Noise Equivalent Level): a noise measurement scale applied over a 24-hour period to all noise events received at the measurement point. It is weighted more heavily for evening and night periods in order to account for the lower tolerance of individuals to noise during those periods.

CPC: Los Angeles City Planning Commission.

dB: decibel. A decibel is a unit for measuring the relative loudness of sound.

dBA: 'A' measures the level of sound the way sound is received by the human ear. Combined with dB (decibels) it is used to measure decibel level related to human hearing. CNEL is weighted, therefore the 'A' does not appear when CNEL and dB are referenced together.

DOA: Los Angeles Department of Airports. In 1997 the Board of Airports Commissioners, approved the name "Los Angeles World Airports" as the business title of the department. The official (charter) name, DOA, was not changed.

EIR: environmental impact report, a requirement of CEQA.

EIS: environmental impact statement, a requirement of NEPA.

EPA: federal Environmental Protection Agency.

FAA: Federal Aviation Administration.

FAR: Federal Aviation Regulation.

FHA: Federal Highway Administration of the U.S. Department of Transportation.

FTA: Federal Transit Administration of the U.S. Department of Transportation.

Flight: a landing or departure of an aircraft.

General aviation airport: an airport that does not serve scheduled air carriers.

Intermittent noise: periodic noise, as opposed to ambient noise.

Intrusive noise: isolated noise incidents in which the particular noise is greater than the ambient noise level.

LAMC: Los Angeles Municipal Code.

LAWA: Los Angeles World Airports, the business name for the Los Angeles Department of Airports.

LAX: Los Angeles International Airport.

Ldn: average day-night sound level weighted to account for the lower tolerance of people to noise during the night period. Approximately a half a decibel lower than CNEL.

MTA: Los Angeles County Metropolitan Transportation Authority.

NEPA: National Environmental Policy Act of 1969.

Noise contours: mapped lines around a noise source to indicate specific levels of intensity of community exposure to the noise, e.g., an airport.

Noise source: generator of the sound being measured.

SCRRA: Southern California Regional Rail Authority (Metrolink).

SMO: Santa Monica Airport.

VNY: Van Nuys Airport.

Exhibit H: Common Noise Levels

(Caltrans Noise Manual, California Department of Transportation, March 1980)

Noise Level (dBA)	Common Indoor Noise Levels	Common Outdoor Noise Levels
110	Rock Band	
100	Inside Subway Train	Jet Flyover @ 1,000 feet Gas Lawn Mower @ 3 feet
90	Food Blender @ 3 feet	Diesel Truck @ 50 feet Noisy Urban Daytime
80	Garbage Disposal @ 3 feet Shouting @ 3 feet	
70	Vacuum Cleaner @ 10 feet	Gas Lawn Mower @ 100 feet Commercial Area
60	Normal Speech @ 3 feet Large Business Office	Heavy Traffic @ 300 feet
50	Dishwasher next room	Quiet Urban Daytime
40	Small Theater/Conference Room (background)	Quiet Urban Nightime Quiet Suburban Nightime
30	Library Bedroom at Night	
20	Concert Hall (background) Broadcast & Recording Studio	Quiet Rural Nightime
10		
0	Threshold of Hearing	

Exhibit I: Guidelines for Noise Compatible Land Use

(Based on the Governor's Office of Planning and Research, "General Plan Guidelines", 1990. To help guide determination of appropriate land use and mitigation measures vis-a-vis existing or anticipated ambient noise levels)

Land Use Category	Day-Night Average Exterior Sound Level (CNEL dB) 50	55	60	65	70	75	80
Residential Single Family, Duplex, Mobile Home	A	C	C	C	N	U	U
Residential Multi-Family	A	A	C	C	N	U	U
Transient Lodging, Motel, Hotel	A	A	C	C	N	U	U
School, Library, Church, Hospital, Nursing Home	A	A	C	C	N	N	U
Auditorium, Concert Hall, Ampitheater	C	C	C	C/N	U	U	U
Sports Arena, Outdoor Spectator Sports	C	C	C	C	C/U	U	U
Playground, Neighborhood Park	A	A	A	A/N	N	N/U	U
Golf Course, Riding Stable, Water Recreation, Cemetery	A	A	A	A	N	A/N	U
Office Building, Business, Commercial, Professional	A	A	A	A/C	C	C/N	N
Agriculture, Industrial, Manufacturing, Utilities	A	A	A	A	A/C	C/N	N

A = Normally acceptable. Specified land use is satisfactory, based upon assumption buildings involved are conventional construction, without any special noise insulation.

C = Conditionally acceptable. New construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice.

N = Normally unacceptable. New construction or development generally should be discouraged. A detailed analysis of noise reduction requirements must be made and noise insulation features included in the design of a project.

U = Clearly unacceptable. New construction or development generally should not be undertaken.

City of Los Angeles Municipal Code

CHAPTER XI
NOISE REGULATION

(Added by Ord. No. 144,331, Eff. 3/2/73.)

Article

ARTICLE 1
GENERAL PROVISIONS

Section

SEC. 111.00. DECLARATION OF POLICY.

It is hereby declared to be the policy of the City to prohibit unnecessary, excessive and annoying **noises** from all sources subject to its police power. At certain levels **noises** are detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed.

SEC. 111.01. DEFINITIONS.

Unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

(a) "**Ambient Noise** " is the composite of **noise** from all sources near and far in a given environment, exclusive of occasional and transient intrusive **noise** sources and of the particular **noise** source or sources to be measured. Ambient **noise** shall be averaged over a period of at least 15 minutes at a location and time of day comparable to that during which the measurement is taken of the particular **noise** source being measured. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(b) "**Commercial Purpose**" is the use, operation, or maintenance of any sound amplifying equipment for the purpose of advertising any business, goods, or services, or for the purpose of attracting the attention of the public to, advertising for, or soliciting patronage or customers to or for any performance, show, entertainment, exhibition, or event, or for the purpose of demonstrating such sound equipment. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(c) "**Decibel**" (dB) is a unit of level which denotes the ratio between two (2) quantities which are proportional to power; the number of decibels corresponding to the ratio of two (2) amounts of power is ten (10) times the logarithm to the base (10) of this ratio. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(d) "**Emergency Work**" is work made necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger, or work by private or public utilities when restoring utility service. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(e) "**Impulsive Sound**" is sound of short duration, usually less than one second, with an abrupt onset and rapid decay. By way of example "**impulsive sound**" shall include, but shall not be limited to, explosions, musical base drum beats, or the discharge of firearms. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(f) "**Motor Vehicle**" includes, but shall not be limited to, automobiles, trucks, motorcycles, minibikes and go-carts. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(g) "**Noncommercial Purpose**" is the use, operation, or maintenance of any sound equipment for other than a "commercial purpose". "Noncommercial purpose" shall mean and include, but shall not be limited to, philanthropic, political, patriotic, and charitable purposes. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(h) "**Octave Band Noise Analyzer**" is an instrument for measurement of sound levels in octave frequency bands which satisfies the pertinent requirements for Class II octave band analyzers of the American National Standard Specifications for Octave, Half-Octave, and Third-Octave Band Filters, S1.11-1966 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(i) "**Person**" is a person, firm, association, co-partnership, joint venture, corporation, or any entity, private or public in nature. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(j) "**Sound Amplifying Equipment**" **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** is any machine or device for the amplification of the human voice, music or any other sound, but shall not include:

1. Automobile radios, stereo players or television receivers when used and heard only by the occupants of the vehicle in which the same is installed.

2. Radio, stereo players, phonographs or television receivers used in any house or apartment within any residential zone or within 500 feet thereof.

3. Warning devices on emergency vehicles.

4. Horns or other warning devices authorized by law on any vehicle when used for traffic purposes.

(k) "**Sound Level**" (**Noise** level) in decibels (dB) is the sound measured with the "A" weighting and slow responses by a sound level meter; except for impulsive or rapidly varying sounds, the fast response shall be used. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(l) "**Sound Level Meter**" is an instrument including a microphone, an amplifier, an output meter, and "A" frequency weighting network for the measurement of sound levels which satisfies the pertinent requirements for Type S2A meters in American Standard Specifications for sound level meters in S1.4-1971 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(m) "**Sound Truck**" is any motor vehicle, or any other vehicle regardless of motive power, whether in motion or stationary, which carries, is equipped with, or which has mounted thereon, or attached thereto, any sound amplifying equipment. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(n) **Supplementary Definitions of Technical Terms**. Definitions of technical terms not defined herein shall be obtained from American Standard Acoustical Terminology S1-1-1971 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.02. SOUND LEVEL MEASUREMENT PROCEDURE AND CRITERIA.

(Title amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the "A" weighting and response as indicated in Section 111.01(k) of this article.

Except when impractical, the microphone shall be located four to five feet above the ground and ten feet or more from the nearest reflective surface. However, in those cases where another elevation is deemed appropriated, the latter shall be utilized.

Interior sound level measurements shall be made at a point at least four feet from the wall, ceiling, or floor nearest the **noise** source.

Calibration of the sound level meter, utilizing an acoustic calibrator shall be performed immediately prior to recording any sound level data. The ambient **noise** level and the level of a particular **noise** being measured shall be the numerical average of **noise** measurements taken at a given location during a given time period.

(b) **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** Where the sound alleged to be offending is of a type or character set forth below, the following values shall be added to the sound level measurement of the offending **noise** :

1. Except for **noise** emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to the effective date of the ordinance enacting this chapter, any steady tone with audible fundamental frequency or overtones have 200 Hz +5

2. Repeated impulsive **noise** +5

3. **Noise** occurring more than 5 but less than 15 minutes in any period of 60 consecutive minutes between the hours of 7:00 a.m. and 10:00 p.m. of any day -5

4. **Noise** occurring five minutes or less in any period of 60 consecutive minutes, between the hours of 7:00 a.m. and 10:00 p.m. of any day -5

(Amended by Ord. No. 161,574, Eff. 9/8/86.)

(c) For those cases where an objectionable **noise** is clearly audible, but where the level of ambient **noise** does not permit direct quantative sound level "A" measurements of the objectionable **noise** , sound measurements may be performed utilizing an octave band sound analyzer to determine sound level "A" limits as indicated in the Table I below. This table is used to convert the sound pressure level meter readings in dB for each band to SPL in dB(A) for each band.

TABLE I

OCTAVE BAND NOISE VALUES CORRESPONDING TO SOUND LEVEL "A" VALUES

Sound Level	**Octave Band Sound Pressure Level, dB re .0002 dyne/cm^2** **Octave Band Center Frequency in Hz**								
"A"	31.5	63	125	250	500	1000	2000	4000	8000
35	58	50	42	35	32	29	26	23	20
40	61	54	46	40	37	34	31	28	25
45	64	58	51	45	42	39	36	33	30

50	67	61	55	50	47	44	41	38	35
55	70	64	60	55	52	49	46	43	40
60	73	68	64	60	57	54	51	48	45
65	76	72	68	65	62	59	56	53	50
70	79	76	73	70	67	64	61	58	55
75	84	81	78	75	72	69	66	63	60

(d) For those cases where a sound level measurement has been made pursuant to the provisions of this chapter and two or more provisions of this chapter apply, the provision establishing the lower or lowest **noise** level, respectively, shall be used. **(Added by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.03. MINIMUM AMBIENT NOISE LEVEL.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

Where the ambient **noise** level is less than the presumed ambient **noise** level designated in this section, the presumed ambient **noise** level in this section shall be deemed to be the minimum ambient **noise** level for purposes of this chapter.

TABLE II

SOUND LEVEL "A" DECIBELS

(In this chart, daytime levels are to be used from 7:00 a.m. to 10:00 p.m. and nighttime levels from 10:00 p.m. to 7:00 a.m.)

	PRESUMED AMBIENT NOISE LEVEL (dB(A))	
ZONE	**DAY**	**NIGHT**
A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50	40
P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60	55
M1, MR1, and MR2	60	55

M2 and M3	65	65

At the boundary line between two zones, the presumed ambient **noise** level of the quieter zone shall be used.

SEC. 111.04. VIOLATIONS: ADDITIONAL REMEDIES, INJUNCTIONS.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter, which operation or maintenance causes discomfort or annoyance to reasonable persons or which endangers the comfort, repose, health, or peace of residents in the area, shall be deemed and is declared to be.a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court order of competent jurisdiction. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.05. ENFORCEMENT, CITATIONS.

(Added by Ord. No. 156,363, Eff. 3/29/82.)

(a) The Department of Building and Safety shall have the power and duty to enforce the following **noise** control provisions of this Code: Section 12.14A-6(h), Section 12.19A-4(b)(1), Section 112.02 and Section 112.04(c). **(Amended by Ord. No. 172,086, Eff. 7/30/98.)**

(b) The Police Department shall have the power and duty to enforce the following **noise** control provisions of this Code: Section 41.32, Section 41.40, Section 41.42, Section 41.44, Section 41.57, Section 63.51(m), Section 112.01, Section 112.04, Section 112.05, Section 112.06, Section 113.01, Section 114.01 through Section 114.05, inclusive, Section 115.02, and Section 116.01. **(Amended by Ord. No. 161,574, Eff. 9/8/86.)**

(c) Any Building Mechanical Inspector assigned to **noise** enforcement inspection shall have the power, authority and immunity of a public officer and employee, as set forth in the Penal Code of the State of California, Section 836.5, to make arrests without a warrant whenever such employee has reasonable cause to believe that the person to be arrested has committed a misdemeanor in his presence which is a violation of any provision set forth in Section 111.05(a) of this chapter. The provisions of said Penal Code section regarding issuance of a written promise to appear shall be applicable to arrests authorized herein.

ARTICLE 2
SPECIAL NOISE SOURCES

Section

SEC. 112.01. RADIOS, TELEVISION SETS, AND SIMILAR DEVICES.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person within any zone of the City to use or operate any radio, musical instrument, phonograph, television receiver, or other machine or device for the producing, reproducing or amplification of the human voice, music, or any other sound, in such a manner, as to disturb the peace, quiet, and comfort of neighbor occupants or any reasonable person residing or working in the area.

(b) Any **noise** level caused by such use or operation which is audible to the human ear at a distance in excess of 150 feet from the property line of the **noise** source, within any residential zone of the City or within 500 feet thereof, shall be a violation of the provisions of this section.

(c) Any **noise** level caused by such use or operation which exceeds the ambient **noise** level on the premises of any other occupied property, or if a condominium, apartment house, duplex, or attached business, within any adjoining unit, by more than five (5) decibels shall be a violation of the provisions of this section.

SEC. 112.02. AIR CONDITIONING, REFRIGERATION, HEATING, PUMPING, FILTERING EQUIPMENT.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person, within any zone of the city to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any **noise** which would cause the **noise** level on the premises of any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit.to exceed the ambient **noise** level by more than five (5) decibels

(b) This section shall not be applicable to emergency work as defined in Section 111.01(c) of this chapter, or to periodic maintenance or testing of such equipment reasonably necessary to maintain such equipment in good working order.

SEC. 112.03. CONSTRUCTION NOISE .

Noise due to construction or repair work shall be regulated as provided by Section 41.40 of this Code. **(Amended by Ord. No. 161,574, Eff. 9/8/86.)**

SEC. 41.40. NOISE DUE TO CONSTRUCTION, EXCAVATION WORK – WHEN PROHIBITED.

(a) No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power driven drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and wilfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code. **(Amended by Ord. No. 158,587, Eff. 1/29/84.)**

(b) The provisions of Subsection (a) shall not apply to any person who performs the construction, repair or excavation work involved pursuant to the express written permission of the Board of Police Commissioners through its Executive Director. The Executive Director, on behalf of the Board, may grant this permission, upon application in writing, where the work proposed to be done is in the public interest, or where hardship or injustice, or unreasonable delay would result from its interruption during the hours mentioned above, or where the building or structure involved is devoted or intended to be devoted to a use immediately related to public defense. The provisions of this section shall not in any event apply to construction, repair or excavation work done within any district zoned for manufacturing or industrial uses under the provisions of Chapter I of this Code, nor to emergency work necessitated by any flood, fire or other catastrophe. **(Amended by Ord. No. 178,160, Eff. 2/12/07.)**

(c) **(Amended by Ord. No. 166,170, Eff. 9/29/90.)** No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling shall perform any construction or repair work of any kind upon, or any earth grading for, any building or structure located on land developed with residential buildings under the provisions of Chapter I of this Code, or perform such work within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday nor at any time on any Sunday. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited on Saturdays and on Sundays during the hours herein specified. The provisions of this subsection shall not apply to persons engaged in the emergency repair of:

1. Any building or structure.
2. Earth supporting or endangering any building or structure.
3. Any public utility.
4. Any public way or adjacent earth.

(d) The provisions of Subsection (c) shall not apply to construction work done on the Metro Rail Project and the tunnel-station portions of the Los Angeles-Long Beach Rail Project between Sixth to Twelfth Streets, provided however that this construction work shall not include the utilization of soldier pile drilling, vibrating hammer driving, blasting, or any construction activities that will exceed the ambient noise levels as provided in the action of the Police Commission, pursuant to Subsection (b) above, granting a variance for this work. In addition, this construction work will be subject to all the conditions of the conditional variance granted by the Board through its Executive Director. This section shall have no force or effect upon completion of the construction work described here. **(Amended by Ord. No. 178,160, Eff. 2/12/07.)**

(e) The provisions of this section shall not apply to construction work done by CALTRANS to repair the collapsed sections of the Santa Monica Freeway within a one mile radius of the intersection of Interstate 10 and Fairfax Avenue. This section shall have no force and effect upon completion of the construction work herein described. **(Added by Ord. No. 169,669, Eff. 5/13/94.)**

(f) The provisions of this section shall not apply to construction work done by the County of Los Angeles in connection with Phases 2 and 3 of Unit 5 of the Hollyhills Storm Drain Project, including the installation of temporary bridges and any other structures necessary to regulate or direct traffic because of the storm drain construction. Unit 5 construction is within the area bounded by Beverly Boulevard, 3rd Street, La Cienega Boulevard and San Vicente Boulevard. Phases 2 and 3 involve several underground concrete structures to be built in and around the intersection of La Cienega and San Vicente Boulevards. This section shall have no force and effect upon completion of the construction work herein specified. **(Added by Ord. No. 172, 091, Eff. 7/3/98.)**

(g) The provisions of Subsection (c) shall not apply to construction work undertaken from March 31, 2000 to August 20, 2000 that must be done prior to the Democratic National Convention, provided however that such construction work will be subject to all conditions established by the Los Angeles Police Department Noise Enforcement Team, in 1) the downtown area bounded by Union Street on the west, Washington on the south, San Pedro on the east, and 101 Freeway on the North, including but not limited to work undertaken in compliance with construction permits issued by the Bureau of Engineering, water line improvements/installation, sewer construction, fiber optic installation, and street paving or is associated with the Convention such as installation and removal of security barriers and fencing and 2) the Windward Plaza area of Venice Beach, between 18th Place and Horizon Avenue from the western border of Ocean Front Walk to the beach, for the Venice Beach Ocean Front Walk Refurbishment Project under the direction of the City of Los Angeles Department of Recreation and Parks Department. This section shall have no force and effect after August 20, 2000. **(Added by Ord. No. 173,154, Eff. 4/30/00.)**

(h) The provisions of Subsection (c) shall not apply to the construction work done by the City of Los Angeles in connection with the portion of the Stone-Hollywood Trunk Line from Stone Canyon Reservoir service area to the Hollywood Reservoir service area as part of the Hollywood Water Quality Improvement Project undertaken on Pico Boulevard, including all structures and operations necessary for construction and/or to regulate or direct traffic due to construction activities. This section shall have no force and effect upon completion of the construction work herein specified. **(Added by Ord. No. 173,746, Eff. 1/23/01.)**

[(i) None.]

(j) As determined by the Executive Director of the Board, the provisions of Subsection (c) shall not apply to major public works construction by the City of Los Angeles and its proprietary Departments, including all structures and operations necessary to regulate or direct traffic due to construction activities. The Board, through its Executive Director, pursuant to Subsection (b) will grant a variance for this work and construction activities will be subject to all conditions of the variance as granted. Concurrent with the request for a variance, the City Department that will conduct the construction work will notify each affected Council district office and established Neighborhood Council of projects where proposed Sunday and/or Holiday work will occur. **(Amended by Ord. No. 178,160, Eff. 2/12/07.)**

(k) **Noise Variance Application Fee.** Any application to the Board for a noise variance under Subsection (b) shall be accompanied by payment of an application fee of $252.00. **(Amended by Ord. No. 184,481, Eff. 10/17/16.).)**

SEC. 112.04. POWERED EQUIPMENT INTENDED FOR REPETITIVE USE IN RESIDENTIAL AREAS AND OTHER MACHINERY, EQUIPMENT, AND DEVICES.

(Title and Section Amended by Ord. No. 161,574, Eff 9/8/86.)

(a) Between the hours of 10:00 p.m and. 7:00 a.m. of the following day, no person shall operate any lawn mower, backpack blower, lawn edger, riding tractor, or any other machinery, equipment, or other mechanical or electrical device, or any hand tool which creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of a residence.

(b) Except as to the equipment and operations specifically mentioned and related elsewhere in this Chapter or for emergency work as that term is defined in Section 111.01(d), and except as to aircraft, tow tractors, aircraft auxiliary power units, trains and motor vehicles in their respective operations governed by State or federal regulations, no person shall operate or cause to be operated any machinery, equipment, tools, or other mechanical or electrical device, or engage in any other activity in such manner as to create any **noise** which would cause the **noise** level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient **noise** level by more than five (5) decibels.

(c) Notwithstanding the provisions of Subsection (a) above, no gas powered blower shall be used within 500 feet of a residence at anytime. Both the user of such a blower as well as the individual who contracted for the services of the user, if any, shall be subject to the requirements of and penalty provisions for this ordinance. Violation of the provisions of this subsection shall be punishable as an infraction in an amount not to exceed One Hundred Dollars ($100.00), notwithstanding the graduated fines set forth in L.A.M.C. § 11.00(m). **(Amended by Ord. No. 171,890, Eff. 2/13/98.)**

SEC. 112.05. MAXIMUM NOISE LEVEL OF POWERED EQUIPMENT OR POWERED HAND TOOLS.

(Amended by Ord. No. 161,574, Eff. 9/8/86.)

Between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum **noise** level exceeding the following **noise** limits at a distance of 50 feet therefrom:

(a) 75dB(A) for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;

(b) 75dB(A) for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;

(c) 65dB(A) for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors;

The **noise** limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by **noise** limits for such equipment from and after their establishment by final regulations adopted by the Federal Environmental Protection Agency and published in the Federal Register.

Said **noise** limitations shall not apply where compliance therewith is technically infeasible The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said **noise** limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other **noise** reduction device or techniques during the operation of the equipment.

SEC. 112.06. PLACES OF PUBLIC ENTERTAINMENT.

It shall be unlawful for any person to operate, play, or to permit the operation or playing of any radio, television receiver, phonograph, musical instrument, sound amplifying equipment, or similar device which produces, reproduces, or amplifies sound in any place of public entertainment at a sound level greater than 95dB(A) at any point that is normally occupied by a customer, unless a conspicuous and legible sign is located outside such place, near each public entrance, stating:

“WARNING: SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT.”

(Added by Ord. No. 156,363, Eff. 3/29/82.)

ARTICLE 3
SANITARY OPERATION

Section

113.01 Rubbish and Garbage Collection and Disposal.

SEC. 113.01. RUBBISH AND GARBAGE COLLECTION AND DISPOSAL.

(Amended by Ord. No. 161,574, Eff. 9/8/86.)

It shall be unlawful for any person engaged in the business of collecting or disposing of rubbish or garbage to operate any refuse disposal truck, parking lot sweeper, or vacuum truck, or to collect, load, pick up, transfer, unload, dump, discard, sweep, vacuum, or dispose of any rubbish or garbage, as such terms are defined in Section 66.00 of this Code, within 200 feet of any residential building between the hours of 9:00 p.m. and 6:00 a.m. of the following day, unless a permit therefore has been duly obtained beforehand from the Board of Police Commissioners.

The standards which shall be considered in determining whether a permit shall be granted are the following:

(a) Whether the work to be done is in the public interest, or

(b) Whether the applicant would suffer hardship, injustice or delay if the permit were not granted, or

(c) Whether fuel conservation would result if the permit were issued.

No permit shall be required to perform emergency work as defined in Sec. 111.01(c) of this chapter.

ARTICLE 4
VEHICLES

Section

SEC. 114.01. VEHICLE REPAIRS.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

It shall be unlawful for any person, within any residential property located within any residential zone of the City or within 500 feet thereof, to repair, rebuild, reconstruct or dismantle any motor vehicle between the hours of 8:00 p.m. of one day and 8:00 a.m. of the next day in such manner:

(a) That a reasonable person residing in the area is caused discomfort or annoyance;

(d) That such activity is audible to the human ear at a distance in excess of 150 feet from the property line of the **noise** source;

(c) As to create any **noise** which would cause the **noise** level on the premises of any occupied residential property, or if a condominium, apartment house or duplex, within any adjoining unit, to exceed the ambient **noise** level by more than five (5) decibels.

SEC. 114.02. MOTOR DRIVEN VEHICLES.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person to unreasonably operate any motor driven vehicle upon any property within the City or to unreasonably accelerate the engine of any vehicle, or unreasonably sound, blow or operate the horn or other warning device of such vehicle in such manner:

1. As to disturb the peace, quiet and comfort of any neighborhood or of any reasonable person residing in such area

2. That such activity is audible to the human ear at a distance in excess of 150 feet from the property line of the **noise** source;

3. As to create any **noise** which would cause the **noise** level on the premises of any occupied residential property, or if a condominium, apartment house or duplex, within any adjoining unit, to exceed the ambient **noise** level by more than five (5) decibels.

(b) This section shall not be applicable to any vehicle which is operated upon any public highway, street or right-of-way or to the operation of any off-highway vehicle to the extent it is regulated in the Vehicle Code.

SEC. 114.03. VEHICLES – LOADING AND UNLOADING.

(Amended by Ord. No. 166,514, Eff. 1/24/91.)

(a) It shall be unlawful for any person, between the hours of 10:00 p.m. and 7:00 a.m. of the following day, to load or unload any vehicle, or operate any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary **noise** within 200 feet of any residential building.

(b) Irrespective of the provisions of Subsection (a), loading or unloading of vehicles of the type of activity referred to in Subsection (a) may occur between the hours of 6:00 a.m. to 11:00 p.m. of the same day pursuant to a permit issued by the Department of Transportation in accordance with a business program as defined by said department. This permit program would be limited to the area bounded by Western Avenue, Santa Monica Freeway, Central Avenue, and the San Diego Freeway, within the limits of the City of Los Angeles. Such permits will not be issued to high-**noise** businesses such as trash pickup.

SEC. 114.04. AUDIBLE SIGNALING DEVICES.

(Added by Ord. No. 161,574, Eff. 9/8/86.)

It shall be unlawful for any person, within any residential zone of the City or within 500 feet thereof, to sound, blow, or operate any audible signaling device, including sequential airhorns or electronically operated vehicular loud speaker music devices, which can be heard for a distance greater than 200 feet for any purpose. Violation of this section shall constitute an infraction This section does not address horn or warning devices regulated in Article 1 of Chapter 5 of Division 12 of the Vehicle Code of the State of California, commencing at Section 27000. **(Last sentence amended by Ord. No. 165.191, Eff. 10/23/89.)**

SEC. 114.05. AUDIBLE ADVERTISING DEVICES – COMMERCIAL FOOD VENDORS.

(Added by Ord. No. 164,532, Eff. 4/20/89.)

Notwithstanding the provisions of Section 114.04, it shall be unlawful for any person, to sound, blow or operate any music, chimes or bells, or any similar sound device, amplified or otherwise, within 200 feet of any residential building between the hours of 9:00 p.m. and 7:00 a.m. the next day while operating a catering truck, as that term is defined in Section 80.73 of the Municipal Code.

SEC. 114.06. VEHICLE THEFT ALARM SYSTEMS.

(Former Sec. 114.05, Renumbered by Ord. No. 164,532, Eff. 4/20/89.)

It shall be unlawful for any person to install, operate or use any vehicle theft alarm system that emits or causes the emission of an audible sound, which is not, or does not become, automatically and completely silenced within five minutes. The time period shall be calculated based upon the emission of the first audible sound and shall end five minutes thereafter notwithstanding any variation or stoppage in the emissions of audible sound. Violation of this section shall constitute an infraction.

SEC. 114.07. AUDIBLE STATUS INDICATOR.

(Added by Ord. No. 169,785, Eff. 6/9/94.)

It shall be unlawful for any person to install, operate, use or maintain any vehicle theft alarm system which utilizes an audible status indicator emitting or causing the emission of an audible sound for a duration of more than one minute. The time period shall be calculated from the point in time of the emission of the first audible sound used in calculation and shall end one minute thereafter, notwithstanding any variation or temporary stoppage in the emission of audible sound.

As used in this section, an audible status indicator is a component of a vehicle theft alarm system which emits sound audible outside the vehicle for the purpose of warning that a vehicle theft alarm system is installed and armed or operational. The term “**audible status indicator**” shall include any device which emits a chirp, voice message or other sound when an approaching person is within a certain distance of the vehicle in which the device is installed.

In the event enforcement of a violation occurs under this section, no enforcement shall be taken under Section 80.75.l of the Municipal Code for the same violation.

Violation of any provision of this section shall constitute an infraction.

ARTICLE 5
AMPLIFIED SOUND

Section

SEC. 115.01. PURPOSE.

The Council enacts this legislation for the sole purpose of securing and promoting the public health, comfort, safety, and welfare of its citizenry. While recognizing that certain uses of sound amplifying equipment are protected by the constitutional rights of freedom of speech and assembly, the Council nevertheless feels obligated to reasonably regulate the use of sound amplifying equipment in order to protect the correlative constitutional rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary **noise** .

SEC. 115.02. PROHIBITION AND REGULATIONS.

It shall be unlawful for any person, other than personnel of law enforcement or governmental agencies, or permittees duly authorized to use the same pursuant to Sec. 103.111 of this Code, to install, use, or operate within the City a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures, or transmitting music to any persons or assemblages of persons in or upon any public street, alley, sidewalk, park or place, or other public property except when installed, used or operated in compliance with the following provisions:

(a) In all residential zones and within 500 feet thereof, no sound amplifying equipment shall be installed, operated or used for commercial purposes at any time.

(b) The operation or use of sound amplifying equipment for noncommercial purposes in all residential zones and within 500 feet thereof, except when used for regularly scheduled operative functions by any school or for the usual and customary purposes of any church, is prohibited between the hours of 4:30 p.m. and 9:00 a.m. of the following day.

(c) In all other zones, except such portions thereof as may be included within 500 feet of any residential zone, the operation or use of sound amplifying equipment for commercial purposes is prohibited between the hours of 9:00 p.m. and 8:00 a.m. of the following day.

(d) In all other zones, except such portions thereof as may be included within 500 feet of any residential zone, the operation or use of sound amplifying equipment for noncommercial purposes is prohibited between the hours of 10:00 p.m. and 7:00 a.m. of the following day.

(e) The only sounds permitted shall be either music, human speech, or both.

(f) Sound emanating from sound amplifying equipment shall be limited in volume, tone and intensity as follows:

1. The sound shall not be audible at a distance in excess of 200 feet from the sound equipment.

2. In no event shall the sound be loud and raucous or unreasonably jarring, disturbing, annoying or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.

(g) Except as provided in (b) above, no sound amplifying equipment shall be operated upon any property adjacent to and within 200 feet of any hospital grounds or any school or church building while in use.

(h) **(Amended by Ord. No. 145,691, Eff. 5/2/74.)** The operation or use of any sound amplifying equipment installed, mounted, attached or carried in or by any sound truck is further prohibited:

1. Within the Central Traffic district at any time;
2. Upon Hollywood Boulevard between Vermont Avenue and La Brea at any time;
3. Upon Wilshire Boulevard at any time;
4. Upon Sunset Boulevard at any time;
5. Upon Vine Street at any time;

6. Upon any street between the hours of 4:30 p.m. and 9:00 a.m. of the following day;

7. Upon any street on any Sunday.

ARTICLE 6
GENERAL NOISE

Section

116.01 Loud, Unnecessary and Unusual **Noise** .

SEC. 116.01. LOUD, UNNECESSARY AND UNUSUAL NOISE .

Notwithstanding any other provisions of this chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, and unusual **noise** which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing in the area. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

(a) The level of **noise** ;

(b) Whether the nature of the **noise** is usual or unusual;

(c) Whether the origin of the **noise** is natural or unnatural;

(d) The level and intensity of the background **noise** , if any;

(e) The proximity of the **noise** to residential sleeping facilities;

(f) The nature and zoning of the area within which the **noise** emanates;

(g) The density of the inhabitation of the area within which the **noise** emanates;

(h) The time of the day and night the **noise** occurs;

(i) The duration of the **noise** ;

(j) Whether the **noise** is recurrent, intermittent, or constant; and

(k) Whether the **noise** is produced by a commercial or noncommercial activity.

Construction Generated Vibration

Vibration Annoyance Criteria

Distance that exceeds annoyance threshold	
Pile Driver	350
Vibratory Roller	90
Large Bulldozer	50

Receptor: **Average Vibration Level - apartments to east** **Average Distance (feet):** **550**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Vibratory Roller	94	54
Caisson Drill	87	47
Large bulldozer	87	47
Small bulldozer	58	18
Jackhammer	79	39
Loaded trucks	86	46
	Criteria	**78**

Receptor: **Average Vibration Level - homes across Victory Blvd (N)** **Average Distance (feet):** **570**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Vibratory Roller	94	53
Caisson Drill	87	46
Large bulldozer	87	46
Small bulldozer	58	17
Jackhammer	79	38
Loaded trucks	86	45
	Criteria	**78**

Receptor: **Average Vibration Levels - homes across Yolanda Ave (W)** **Average Distance (feet):** **650**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Vibratory Roller	94	52
Caisson Drill	87	45
Large bulldozer	87	45
Small bulldozer	58	16
Jackhammer	79	37
Loaded trucks	86	44
	Criteria	**78**

Receptor: **Average Vibration Levels - homes across Erwin St (S)** **Average Distance (feet):** **525**

Equipment	Approximate Velocity Level at 25 ft, VdB	Approximate Velocity Level, VdB
Vibratory Roller	94	54
Caisson Drill	87	47
Large bulldozer	87	47
Small bulldozer	58	18
Jackhammer	79	39
Loaded trucks	86	46
	Criteria	**78**

Construction Generated Vibration

Structural Damage Criteria

Distance that exceeds damage threshold	
Pile Driver	100
Vibratory Roller	30
Large Bulldozer	15

Receptor: **Maximum Vibration Levels - Apartments to east** **Closest Distance (feet):** **17**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.375
Caisson Drill	0.089	0.159
Large bulldozer	0.089	0.159
Small bulldozer	0.003	0.005
Jackhammer	0.035	0.062
Loaded trucks	0.076	0.136
	Criteria	**0.200**

Receptor: **Maximum Vibration Levels - homes to north across Victory** **Closest Distance (feet):** **125**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.019
Caisson Drill	0.089	0.008
Large bulldozer	0.089	0.008
Small bulldozer	0.003	0.000
Jackhammer	0.035	0.003
Loaded trucks	0.076	0.007
	Criteria	**0.200**

Receptor: **Maximum Vibration Levels - homes to west across Yolanda** **Closest Distance (feet):** **100**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.026
Caisson Drill	0.089	0.011
Large bulldozer	0.089	0.011
Small bulldozer	0.003	0.000
Jackhammer	0.035	0.004
Loaded trucks	0.076	0.010
	Criteria	**0.200**

Receptor: **Maximum Vibration Levels - homes to south across Erwin** **Closest Distance (feet):** **120**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.020
Caisson Drill	0.089	0.008
Large bulldozer	0.089	0.008
Small bulldozer	0.003	0.000
Jackhammer	0.035	0.003
Loaded trucks	0.076	0.007
	Criteria	**0.200**

Receptor: **Maximum Vibration Levels - onsite classrooms** **Closest Distance (feet):** **20**

Equipment	Approximate RMS a Velocity at 25 ft, inch/second	Approximate RMS Velocity Level, inch/second
Vibratory Roller	0.210	0.293
Caisson Drill	0.089	0.124
Large bulldozer	0.089	0.124
Small bulldozer	0.003	0.004
Jackhammer	0.035	0.049
Loaded trucks	0.076	0.106
	Criteria	**0.200**

[1.] Determined based on use of jackhammers or pneumatic hammers that may be used for pavement demolition at a distance of 25 feet

Notes: RMS velocity calculated from vibration level (VdB) using the reference of one microinch/second.

Source: Based on methodology from the United States Department of Transportation Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*

Noise Levels During Construction

Reference Levels: Construction Noise at 50 Feet (dBA Leq)[1]

Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq)[2]
BBN Aggregate Noise Level	50	88

Drop Off
hard=0;
soft=0.5
0

Construction Noise at Apartments to East

Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq)[2]
BBN Aggregate Noise Level	550	67

Construction Noise at Homes across Victory

Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq)[2]
BBN Aggregate Noise Level	570	67

Construction Noise at Homes across Yolanda

Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq)[2]
BBN Aggregate Noise Level	650	66

Construction Noise to Homes across Erwin

Construction Phase	Distance: Receptor to center of activity	Average Level (dBA Leq)[2]
BBN Aggregate Noise Level	525	68

[1] Calculations based on the Roadway Construction Noise Model with the construction information provided by the applicant.

[2] Average daily noise level including all equipment in use simultaneously considering utilization factors.

[3] Maximum instanteneous noise level from the loudest equipment used during the construction phase.

Appendix B.
Initial Study and Notice of Preparation Comments

Los Angeles Unified School District

Facilities Services Division

SHERMAN OAKS CENTER FOR ENRICHED STUDIES

COMPREHENSIVE MODERNIZATION PROJECT

COMMUNITY MEETING

Wednesday, November 8, 2017
6:30 p.m.
SOCES (Glenn Hall)
18605 Erwin St., Reseda, CA 91335

TOPICS:

UPDATE ON PROJECT DESIGN
CALIFORNIA ENVIRONMENTAL QUALITY ACT - SCOPING MEETING
REMOVAL ACTION WORK PLAN (RAW)

EVERYONE IS WELCOME – PLEASE JOIN US!

FOR MORE INFORMATION PLEASE CONTACT TERESA AKINS AT COMMUNITY RELATIONS
DIRECT LINE: (213) 241-1326 MAIN LINE: (213) 241-1340 EMAIL: TERESA.AKINS@LAUSD.NET

Los Angeles Unified School District
Facilities Services Division

SHERMAN OAKS CENTER FOR ENRICHED STUDIES

PROYECTO DE MODERNIZACIÓN INTEGRAL

REUNIÓN COMUNITARIA

Miércoles, 8 de Noviembre, 2017
6:30 p.m.
SOCES (Glenn Hall)
18605 Erwin St., Reseda, CA 91335

TEMAS:

ACTUALIZACIÓN DEL DISEÑO DEL PROYECTO
LEY ESTATAL DE CALIDAD AMBIENTAL - ALCANCE DEL ESTUDIO
PLAN DE REMOCION DE TERRENO

TODOS BIENVENIDOS-ACOMPÁÑENOS!

PARA MÁS INFORMACIÓN LLAME A TERESA AKINS EN FSD COMMUNITY RELATIONS
LÍNEA DIRECTA: (213) 241-1326 LÍNEA CENTRAL: (213) 241-1340 EMAIL: TERESA.AKINS@LAUSD.NET

GABRIELEÑO BAND OF MISSION INDIANS - KIZH NATION
Historically known as The San Gabriel Band of Mission Indians
recognized by the State of California as the aboriginal tribe of the Los Angeles basin

City of Reseda
Los Angeles unified school District
333 South Beaudry Ave, 21st Floor
Los Angeles, CA 90017

November 6, 2017

Re: AB52 Consultation request for the Sherman Oaks Center for Enriched Studies (SOCES) Comprehensive Modernization Project located at18605 Erwin St. in the community of Reseda

Dear Mr. Andrew Modugno,

Please find this letter as a written request for consultation regarding the above-mentioned project pursuant to Public Resources Code § 21080.3.1, subd. (d). Your project lies within our ancestral tribal territory, meaning belonging to or inherited from, which is a higher degree of kinship than traditional or cultural affiliation. Your project is located within a sensitive area and may cause a substantial adverse change in the significance of our tribal cultural resources. Most often, a records search for our tribal cultural resources will result in a "no records found" for the project area. The Native American Heritage Commission (NAHC), ethnographers, historians, and professional archaeologists can only provide limited information that has been previously documented about California Native Tribes. This is the reason the NAHC will always refer the lead agency to the respective Native American Tribe of the area because the NAHC is only aware of general information and are not the experts on each California Tribe. Our Elder Committee & tribal historians are the experts for our Tribe and are able to provide a more complete history (both written and oral) regarding the location of historic villages, trade routes, cemeteries and sacred/religious sites in the project area. Therefore, to avoid adverse effects to our tribal cultural resources, we would like to consult with you and your staff to provide you with a more complete understanding of the prehistoric use(s) of the project area and the potential risks for causing a substantial adverse change to the significance of our tribal cultural resources.

Consultation appointments are available on Wednesdays and Thursdays at our offices at 910 N. Citrus Ave. Covina, CA 91722 or over the phone. Please call toll free 1-844-390-0787 or email gabrielenoindians@yahoo.com to schedule an appointment.

** Prior to the first consultation with our Tribe, we ask all those individuals participating in the consultation to view a video produced and provided by CalEPA and the NAHC for sensitivity and understanding of AB52. You can view their videos at: http://calepa.ca.gov/Tribal/Training/ or http://nahc.ca.gov/2015/12/ab-52-tribal-training/

With Respect,

Andrew Salas, Chairman

Andrew Salas, Chairman
Nadine Salas, Vice-Chairman
Christina Swindall Martinez, secretary
Albert Perez, treasurer I
Martha Gonzalez Lemos, treasurer II
Richard Gradias, Chairman of the Council of Elders
PO Box 393, Covina, CA 91723
www.gabrielenoindians.org
gabrielenoindians@yahoo.com

STATE OF CALIFORNIA Edmund G. Brown Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone (916) 373-3710

LAUSD
OFFICE OF
ENV. HEALTH & SAFETY

2017 NOV 15 PM 3:59

November 8, 2017

Linda Wilde
Los Angeles Unified School District
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017

Sent via e-mail: linda.wilde@lausd.net

RE: SCH# 2017111008; Sherman Oaks Center for Enriched Studies (SOCES) Comprehensive Modernization Project; Los Angeles County, California

Dear Ms. Wilde:

The Native American Heritage Commission has received the Notice of Preparation (NOP) for Draft Environmental Impact Report for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd. (a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a **separate category of cultural resources**, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment (Pub. Resources Code § 21084.2). Please reference California Natural Resources Agency (2016) "Final Text for tribal cultural resources update to Appendix G: Environmental Checklist Form," http://resources.ca.gov/ceqa/docs/ab52/Clean-final-AB-52-App-G-text-Submitted.pdf. Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends **lead agencies consult with all California Native American tribes** that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a **lead agency** shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A **lead agency** shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.
   c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. <u>Conclusion of Consultation</u>: Consultation with a tribe shall be considered concluded when either of the following occurs:
    - **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
    - **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. <u>Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:</u> Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. <u>Required Consideration of Feasible Mitigation</u>: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. <u>Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources</u>:
    - **a.** Avoidance and preservation of the resources in place, including, but not limited to:
        - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
        - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    - **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
        - **i.** Protecting the cultural character and integrity of the resource.
        - **ii.** Protecting the traditional use of the resource.
        - **iii.** Protecting the confidentiality of the resource.
    - **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    - **d.** Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    - **e.** Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    - **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. <u>Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource</u>: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    - **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    - **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    - **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5, subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst
(916) 373-3714

cc: State Clearinghouse

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
South Coast AQMD (909) 396-2000 • www.aqmd.gov

SENT VIA USPS AND E-MAIL: November 17, 2017

CEQA-comments@lausd.net
Los Angeles Unified School District
Office of Environmental Health and Safety
Attention: Linda Wilde, CEQA Project Manager
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA 90017

Notice of Preparation of a Draft Environmental Impact Report for the Sherman Oaks Center for Enriched Studies (SOCES) Comprehensive Modernization Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address shown in the letterhead. **In addition, please send with the Draft EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[1]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, SCAQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from SCAQMD's Subscription Services Department by calling (909) 396-3720. More guidance developed since this Handbook is also available on SCAQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993).

SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

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[1] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

SCAQMD has also developed both regional and localized significance thresholds. SCAQMD staff requests that the Lead Agency quantify criteria pollutant emissions and compare the results to SCAQMD's CEQA regional pollutant emissions significance thresholds to determine air quality impacts. SCAQMD's CEQA regional pollutant emissions significance thresholds can be found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the Proposed Project, it is recommended that the Lead Agency perform a localized analysis by either using the LSTs developed by SCAQMD staff or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.

In the event that the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, available at: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Guidance[2] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

Mitigation Measures

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize these impacts. Pursuant to CEQA Guidelines Section 15126.4

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[2] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

(a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project, including:

- Chapter 11 of SCAQMD's CEQA Air Quality Handbook
- SCAQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- SCAQMD's Mitigation Monitoring and Reporting Plan (MMRP) for the 2016 Air Quality Management Plan (2016 AQMP) available here (starting on page 86): http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

Alternatives

In the event that the Proposed Project generates significant adverse air quality impacts, CEQA requires the consideration and discussion of alternatives to the project or its location which are capable of avoiding or substantially lessening any of the significant effects of the project. The discussion of a reasonable range of potentially feasible alternatives, including a "no project" alternative, is intended to foster informed decision-making and public participation. Pursuant to CEQA Guidelines Section 15126.6(d), the Draft EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project.

Permits

In the event that the Proposed Project requires a permit from SCAQMD, SCAQMD should be identified as a responsible agency for the Proposed Project. For more information on permits, please visit SCAQMD webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to SCAQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available at SCAQMD's webpage at: http://www.aqmd.gov.

SCAQMD staff is available to work with the Lead Agency to ensure that project air quality impacts are accurately evaluated and any significant impacts are mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov or call me at (909) 396-3308.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
LAC171107-04
Control Number

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-0067
FAX (213) 897-1337
www.dot.ca.gov

Serious drought.
Help save water!

November 30, 2017

Ms. Linda Wilde
Los Angeles Unified School District
333 South Beaudry Avenue, 21st Floor
Los Angeles, CA, 90017

RE: SOCES Comprehensive
Modernization
Vic: LA-101 / PM: 21.294
GTS# 07-LA-2017-01205
SCH# 2017111008

Dear Ms. Wilde:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The project consists of demolishing various buildings, constructing new buildings, upgrading facilities throughout the campus, and improvements to comply with federal, state, and local facilities requirements.

Upon reviewing the Notice of Preparation/ Initial Study (NOP/IS), Caltrans has the following comments:

State policies and goals related to sustainable transportation seek to reduce the number of trips made by driving, reduce transportation-related greenhouse gas emissions, and encourage alternative modes of travel. Caltrans' Strategic Management Plan has set a target of tripling trips made by bicycling, as well as doubling trips made by walking and public transit by 2020. The Strategic Plan also seeks to achieve a 15% reduction in statewide per capita vehicle miles traveled by 2020. Similar ambitious goals are embedded in the California Transportation Plan 2040. Statewide legislation such as AB 32 and SB 375, as well as Governor Executive Orders S-3-05 and B-16-12, further echo the need to pursue more sustainable development and transportation patterns. These climate change and sustainable transportation policy goals can only be achieved with active support from local agency partners such as LAUSD.

Please note, LAUSD shares similar policies related to promoting sustainable transportation. In September 2016, the LAUSD School Board adopted Resolution 025-16/17 supporting Safe Routes to School, Vision Zero, and Walk to School Day. All three of these initiatives promote active transportation and elevate pedestrian safety. The resolution language reflects a commitment to help remove barriers to walking and bicycling and offers positive re-enforcement to promote sustainable and healthy transport habits.

In October 2003, the LAUSD Board passed its Resolution on Sustainability and Design of High Performance Schools, directing staff to continue efforts to ensure modernization projects in the

District incorporate Collaborative for High Performance Schools to the extent possible and practical. This includes enhancing student and staff health and minimizing the impact of District operations on the environment. The two aforementioned resolutions, though indirectly, complement each other and can be implemented in tandem to promote more sustainable, active transportation through this school modernization project.

Additionally, in March 2017, LAUSD released its "High Performance Strategies for Major Repair and Modernization Projects" document, which is intended to serve as a tool to help incorporate High Performance/Sustainable design principles into modernization projects. Among the strategies included in the document are efforts to increase tree shade, pervious paving in parking lots, and coordinating installation of bicycle parking.

Absent from the Initial Study is any mention of existing or new bicycle parking to be installed, despite the fact the school campus has on-site bicycle parking and existing policies/initiatives aimed at promoting more sustainable design and active transportation. In Photo 2 on pdf. page 31 of the Initial Study there is bicycle parking visible in the center of the photo. However, the written portions and accompanying diagrams in the document only mention or acknowledge the presence of car parking.

By leaving out discussion or consideration of parking for active transportation (bicycling, skateboard, scooter) and only planning for car parking, the project disproportionately promotes driving and is inconsistent with LAUSD and State sustainability goals. For this reason, we strongly encourage acknowledging existing on-site bicycle parking. Further, we encourage including quality bicycle/skateboard parking and active transportation amenities as part of the project design. Providing such amenities would be consistent with State level policies as well as local LAUSD initiatives. In the absence of such active transportation amenities, site users (including students, facility and staff) may be unable, unpermitted, or discouraged from using alternate modes that can reduce transportation-related greenhouse gas emissions.

Although LAUSD has a limited role in shaping transportation habits, the design of the school (pedestrian-oriented vs automobile-oriented) and amenities it provides (greenspace, car parking, bicycle parking, etc) can influence how site users go to and from the school and this should be considered. Site design that omits or makes needs of active transportation modes secondary would be inconsistent with desired State goals of promoting sustainable transportation and reducing greenhouse gas emissions. Design elements such as providing quality and inviting amenities for active transportation are especially opportune because children are more likely to walk, bicycle, skateboard, or take other active modes than the general population.

In the Draft Environmental Impact Report (DEIR), Caltrans would like to see a discussion of, and provisions for, both car and bicycle parking, not just car parking. A strategy included in LAUSD's "High Performance Strategies for Major Repair and Modernization Projects" recommends identifying a designated area for bicycle and skateboard storage and coordinating site installation with school administrator. Ideally, such a discussion of car and bicycle parking would be complemented with diagrams indicating more precise location, type, and quantity of parking for both modes instead of just one.

Also, please note that page 134 of the pdf for the Initial Study states nearby Reseda Boulevard is striped with "Class I bike lanes." However, these are designated Class II bike lanes, not Class I [bike paths] per the California Highway Design Manual.

Finally, as a reminder any transportation of heavy construction equipment and/or materials requiring use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. Caltrans recommends that large size truck trips be limited to off-peak commute periods. Also, storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Be mindful that the project needs to be designed to discharge clean run-off water. The completed project could incorporate green design elements that can capture storm water. Incorporating permeable pavement, landscaping, and trees to reduce urban water run-off should be considered.

If you have any questions regarding these comments, please contact project coordinator Severin Martinez, at (213)-897-0067 or severin.martinez@dot.ca.gov and refer to GTS# LA-2017-01205.

Sincerely,

MIYA EDMONSON
Acting IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

PUBLIC MEETING

SHERMAN OAKS CENTER FOR ENRICHED STUDIES (SOCES)

COMPREHENSIVE MODERNIZATION PROJECT

COMMUNITY MEETING

Wednesday, November 8, 2017

18605 Erwin Street

Reseda, California 91335

PARK AVENUE DEPOSITION SERVICE
740 North Garey Avenue
Pomona, California 91767
(800) 447-3376

REPORTED BY:
KELLY RAYOS
CSR NO. 13502

Reseda, California

Wednesday, November 8, 2017

6:30 P.M.

-oOo-

MS. AKINS: Good evening. It's 6:30. We're going to get started in about three minutes, so if you would take your seat, we'd appreciate it.

We've got agendas in the back. If you want to keep informed about the projects, please sign in.

MR. PRICE: Evening, everybody. Can we have our mystery guests take their seats at the table. Okay. Well, there's -- their name's on the backside, so they're mystery to you.

My name is Marty Price. I'd like to welcome you all. I am the principal here at Sherman Oaks CES.

The presentation today is the second. We're now past the three designs, and we're down to one, and so you get to hear all about what we think is a very exciting change to our school. And this will be a question-and-answer period for you after the presentation.

So, Mr. Dahdul, I guess you're first.

MR. DAHDUL: No, Teresa is first.

MS. AKINS: Hi there. Welcome, you guys. Welcome to Sherman Oaks Center for Enriched Studies. My name is Teresa Akins.

I work with L.A. Unified Facility Services. I am the organizer. I work on various projects for facilities. I want to thank you guys for coming out this evening.

We're here tonight to talk about the exciting $108 million renovation and upgrade of this campus. So we were here last year and the year before, and we're back.

So we will be continuously coming out to the community, coming out to the teachers, coming out to the stakeholders of SOCES to get feedback, to give updates, to let you know what's happening with this project because this is a long haul for us. We're going to be here for a couple years.

So I just want to remind you that if you sign in, I will keep you invited. I will personally invite you to the next meeting. If we have any updates, I will send them out to you, if you sign in legibly. I especially like e-mail addresses. Those are wonderful.

We have some wonderful people here today that I want to recognize and acknowledge. We have L.A. Unified School District Staff for School and Community Coordinator Ankur Patel here today. I just want to recognize him. He works with the board member for L.A. Unified Scott Schmerelson.

So thank you for coming. We appreciate you.

So tonight I was saying we're going to present a huge amount of information. We're going to go over project design. We're doing an update on design.

We're going to cover CEQA, which is the California Environmental Quality Act, environmental issues as it pertains to this project, so any questions, concerns you have, we want to hear them.

Also we're going to go over the removal action work plan, which is also some testing that was done to the soil, and we'll give you the results, and what we're going to do about it.

So I'm going to ask you to hold your questions until the end of the presentation. Presenters and audience, we're going to hold our questions. We have so much information to go through. We need to just go through it, and then we'll do a Q and A.

I'll also make available the PowerPoint for this evening. If you put on the sign-in, "PowerPoint," I'll send you the PowerPoint either tomorrow or the next day via e-mail.

Housekeeping items: We have a woman's bathroom, men's bathroom in the back, and that's it.

So Issam Dahdul is our next speaker. He is the senior facilities development manager for the project, and here's Issam.

MR. DAHDUL: Good evening, everyone. Thank you for attending our meeting. I see some familiar faces from the last time we were out here.

I'm going to do a quick -- I've got about five minutes in terms of just a project overview of how we got to where we are, and then I'm going to hand it off to our architect.

So let's talk about how -- you know, what is the history of this project? So back in December of 2015, we, the Board of Education, approved a project, a comprehensive -- what we call a comprehensive modernization project on this campus.

When we look at multiple buildings in terms of modernization and construction, the project budget is $108 million, and we're looking at phasing the project with the last phase being completed in the first quarter of 2022.

So you may be familiar with Measure Q. Measure Q is a bond program that was passed back in 2008, about $7 billion. It's ultimately bonds that are paid for with taxpayer dollars through property taxes that funds school facility projects. And so this project is funded by that Measure Q bond that was passed back in 2008. And those funds are being used to modernize the SOCES campus.

Now we have about 600 schools throughout the district, so why did we choose SOCES to do a -- why are we doing a project here?

So we looked at all of our schools, all 600 --

approximately 600 schools, and we ranked them in terms of, okay, you know, how many buildings require a seismic evaluation? How many buildings are in portable classrooms and temporary bungalows? What is the condition of the existing spaces? And we factor all of that in to come up with a score card, if you will, of, you know, a ranking of the different schools.

So we've got projects. The first 11 projects that we're doing: Ranch High School is one of them, SOCES, down in the south San Pedro High School, Huntington Park, et cetera, and SOCES was one of those selected.

So we've been out here a couple times. The first time we came out is really just kind of the overall development of the project where we were looking at what the scope was going to be: How many classrooms are we going to build, how many we're demolishing, what are we going to do with the buildings that require seismic evaluation, et cetera.

And then once we determine that, we came back again and showed you a couple of different options of where the buildings could go once we knew what buildings we wanted to accomplish, what new scope.

And so we're now in the phase of the project where we're in design, and we're now looking at doing an environmental impact report to study the environmental impacts of the project.

And then from there, we then have to get the design approved by the Division of State Architects, so those plans are then approved, and then we can go ahead and start construction.

Now, what we've done on this project which is just a little different than what we do on some of our other ones, there's just really two ways of constructing a project. You can do design where you go design it, you then get the plans approved by the Division of State Architects, and then you go and find a contractor to construct it.

In this case we utilized what's called "Design Build," which is where you hire the architect and the contractor at the same time. And so through a long effort, we were able to work with Sinanian Development and TSK Architects, which is the firm that we've selected that would be the architect and contractor for this project.

And there's a lot of efficiencies in having the contractor and the architect work together through the design, especially on such a large project such as this.

The next step would be getting the design approved, as well as the project approved through the EIR. When we get into the CEQA part, we'll talk about that.

And construction is two to four years, and that's really because it's phased. You know, a new gymnasium will take anywhere from 18 months to two years to construct, but we can't build all the new buildings at the same time, so we'll phase it over time.

So what are we building? We're demolishing 23 classrooms including 12 relocatable classrooms. We're building 13 elementary schools, 15 secondary rooms. I won't read off the list, but you can get a sense what types of spaces we are providing.

We're demolishing the existing middle school gymnasium. When the school was originally built, it was -- the gymnasium was built for middle school purposes. We're building a comprehensive high school gymnasium. We're replacing the lunch shelter, reconfiguring the admin.

The auditorium is getting a modernization and a seismic retrofit, and then there is some infrastructure work that we're doing as well, as well as some light improvements to the existing classrooms in terms of just finishes. So just to give you a perspective of what's being demolished.

And last time we were here, we looked at three different planning concepts. We looked at single-story buildings, we looked at two-story buildings, we looked at gymnasium outs over by Yolanda. We looked at replacing the gymnasium with a new gym in its current location, and based off of the feedback that we received from the staff, from the administration, et cetera, we ended up with a concept that has a gymnasium being built over by the parking lot.

And went with a single-story elementary school building and two-story science buildings. And Hazim will go over the design in more detail, and I will go ahead and pass it off.

MR. RABADI: Good evening, everyone. Thank you for coming. So as Issam said, I am Hazim Rabadi. I am the managing principal for TSK Architects. I'll run you through the design fairly quickly here.

AUDIENCE: We can't hear you.

MR. RABADI: Hold it closer? Is that better?

AUDIENCE: Yeah.

MR. RABADI: Thank you for letting me know.

So one of the things that we -- when we first came onto the project that we saw was the importance of SOCES within the community. That was one of the things. We had a history to protect, also a campus. We looked at the age of the campus, and that was one of the elements that they really focused on.

So when we were developing the plans with LAUSD, one of the things that really jumped out at us was that we really wanted to enhance that. We do think it's a campus, and it has quite a bit of character, and so we wanted to build upon that character.

And as Issam mentioned, the elementary school building will be a single-story building, and that's really building upon the single-story radial finger plan of the rest of the campus that really blends in with the single-story -- single-family residences of the community.

And then that allowed us to build the science building east and west, that we'll be referring to as we get into a little more detail, off of the center circle of the campus. So it's been on the campus. Now that this is really the heart of the campus, the center circle, it's right off the main access from the administrative building.

We also worked to develop the courtyards. You'll see the elementary school building has steps in and out because we're creating outdoor areas with more landscaping and more areas for the students to gather in small/medium groups.

Same thing with this building over here. You'll see, when we get into a little more detail, there are more opportunities for them to see -- for the students to be able to have events for them.

So the administration will be modernized. The elementary school building here and the two science buildings here, the lunch pavilion, the auditorium will get renovated, and then the gymnasium with updated outdoor play facilities.

Here's a 3D aerial view of the campus. You can start seeing the massing. We placed it actually within the community. You see the lower single-story buildings that still is evident here and then the two-story buildings at the heart of the campus.

It was important, one of the things that the campus -- we felt, when we were coming to campus, is that the north end of the campus was a little bit remote, you know, just above the garden.

So we wanted to create a more friendly area behind the center circle so the students, as they move through the campus, actually are not, you know, just along chain of fences or trash enclosures. That is how it is right now.

MS. LAU: Good evening. My name is May. I'm the project architect. I'll go over some of little floor plans in more detail.

AUDIENCE: A little closer.

MS. LAU: So, again, my name is May. So if you have any questions on the floor plans, you can talk to me about it.

I'll go really quickly before. So as I was saying, the two-story science buildings, they are named Science Buildings, but they are actually one building is focused more on science and the other is music and other general classroom support spaces.

So the Science East Building has -- houses most of the science functions with three science classrooms on the first floor and a robotics lab and also a ceramics arts classroom. And on the second floor are six general chemistry labs, so they're classroom with the workroom supports.

And the Science West Building, like I was mentioning, is more focused on the music functions, so there's a band room on the first floor, and then there are teacher support spaces, like collaboration rooms, small teaching room, and a textbook room. And then on the second floor is the culinary classroom and general classroom spaces.

And both buildings are open corridor with stairs on either ends so there is easy access to the spaces.

I'm passing it over to Kevin to go over the design.

MR. QUAN: Thank you, ma'am. My name is Kevin Quan. I'm the associate principal of TSK Architects and design manager for this particular project.

As Issam had mentioned at the beginning, there is a lot of effort placed at the very beginning about having sufficient time to run through site strategies, placement of buildings on the campus.

And equally so, there was a lot of intercommunication with LAUSD, with the campus about the aesthetics and overall design of the buildings themselves as well.

So we went through a number of efforts here to try to come up with the appropriate balance between the siting of these buildings in the neighborhood, so it's like they have somewhat of a residential feel, and at the same time still being appropriate as academic buildings on a campus.

Knowing that we have high school students here all the way through middle school down to the fourth grade, we wanted to provide a look for the taller buildings that was more collegiate, and have them really resonate as the base and anchor for the center of the campus.

And then equally for the elementary school to have that lower one-story residential feel that can then resonate and blend in with those other one-story elementary school buildings that are already existing on the campus.

We did do a lot of work with the historical architects. They gave us a lot of information and feedback on how to be appropriate in some of the treatments that we're utilizing for the facility.

So, as an example, the Science Building East, you can see that it's a -- the scaled massive two-story building, long rectangle in its overall shape. We wanted to break that up knowing that we've got a lot of students who walk in nearby these buildings.

We wanted to create a human scale for the pedestrian level, so there's a strong base stadium with more durable materials at that lower level, and then on the upper portions, we've got lighter-weight materials that we can buy the feeling and the look, and then applying this ribbon window that you see on the upper portion of it, so that it's also a building of its time.

All right. We're not trying to make it a historical building, we're trying to make it a building of somewhat of its time somewhat contemporary and then still putting things in, like, that sloped roof that you see on the left side of the facility, so that it can also relate to those one-story buildings that are on the south. Next slide.

And as Hazim mentioned earlier, exterior outdoor spaces, we think of them as rooms as well, just as much -- as much as we do interior rooms.

And so a lot of effort was taken with our landscape architect to make certain that we were providing functional spaces in between the buildings that can also be activated and used by both teachers and students alike.

This is a new quad area that we're developing just north of the lunch pavilion, and this has -- similar to the center circle, but not in competition with it, we've got a lower platform outdoor area for smaller venues of either ad hoc classroom settings, or even we've referred to it as the Shakespeare in the Park sort of situation. Go to the next slide, please.

Okay. And then as a multi-function space, we're also looking to try to activate it for nighttime functions as well utilizing the team stage, that back wall that's behind it so that you can have projections, movie nights, et cetera, as well.

So we're expanding the prefunction and lunch pavilion area. We've got a rendering here to show you next. We're replacing the current canopy, raising it up higher over the existing portion, and then the reconfiguration on the northern side of the lower canopy, so that it steps down appropriately to that open quad.

MS. LAU: So the other building that we're putting in is a one-story elementary school building. And it holds 13 elementary school classrooms and also three teaching spaces.

And one of the advantages of this plan is we've created two outdoor areas that relates to -- so this is a trellis-covered lunch area for the elementary school students in addition to the lunch canopy. And then also this is a garden area that supports the -- that's close to the elementary playground. And these are the renderings of the elementary school.

MR. QUAN: Similar to the discussion about the two-story science buildings. Again, durable materials, low -- those areas that are close to students for -- that may be nearby.

Those durable breaking materials that -- the enfaces again, sloped roofs to try to develop that relationship or correlation to the residential buildings in the neighborhood and the houses.

This is another view of the elementary school looking from the north side. We've got the baseball field to the right of this image. These are new elementary school playground areas adjacent to the building, and then in close proximity to those outdoor spaces that May and Hazim referenced.

MS. LAU: The fourth new building that's going on campus is a new gymnasium, so it's a high school scale gymnasium that has a full gymnasium with bleachers, and also a practice gymnasium.

And there are lots of support spaces that supports both the gymnasium and the outdoor courts. And it also will be fitness and dance classrooms that are in the front.

And we also have designed an entry that is for prefunction for events in the gymnasium area, and these are renderings of the gym.

MR. QUAN: So this is the main entrance for the gym facing onto Yolanda. And what we've developed from here is this entrance, prominent easy way finding to it for accessibility.

And then as well these palm trees that are on the right side of the image, that's a -- what we've been referring to as the nice pathway, which heads directly into campus towards the center. It's direct access to the baseball field that's existing there. That then becomes the node for moving southbound to the end of the portion of the campus as well. And then this is a view of the gym from Victory.

MS. LAU: So the existing auditorium building will have renovations in the building including seismic upgrade, and the interiors will get new finishes, new seating.

And so the overall configuration will remain similar to what there is with the stage and the entry on the side with some adjustments held at backstage. The area will be functioning.

And here are some interior views of the auditorium. You can see it's receiving new finishes, new seating, and then the view towards the back.

And the last building that's being renovated is the administration building, and while we recognized that there was an issue with the existing entry of the building.

So the view entry is you come in, and you can access right at the corner of the building, and you come in, get checked in, and then you can access the campus this way (indicating) without having to go through the other offices or coming back out and coming back in.

So this is the entry hub with the administration offices on this end. A health unit here, and then also the counseling offices on this end, and that's the end of the design.

MS. AKINS: All right. Thank you. Sorry, guys. Hello. Hello.

So let me see, does any mic work? Let's see. Test, test, test. Okay. No mics work, but Jorge is going to help me out.

I just want to recognize Andrew Pennington. Andrew Pennington is the director of Land Use and Planning for our city council member, Bob Blumenfield, so I just want to thank you for coming.

We got an extra mic here, so we can keep rolling, and right now, like, if anything works. Let's see. Test, test, test, test. Nothing works. How about that one? Test, test. Test, test. All right.

Right now I want to introduce Andrew Modugno, OEHS Environment Assessment Coordinator, he's going to talk about the removal action work plan.

MR. MODUGNO: Thank you. My name is Andrew Modugno as you just heard.

So I'm going to be talking about the site-assessment process. It's the process that LAUSD does before they do new construction or comp mods, which is considered for large campuses. So when we go out, what are we looking for, what am I talking about, environmental site-assessment process.

First, there are three pieces of it. There's the Phase 1. Then there's the preliminary environmental assessment, and, finally, there's a removal action work plan.

The Phase 1 is basically digging into the history of the parcel before it was even developed. What was here when -- before the school was here? It was agricultural land, grazing land. As many of you know that lived in the Valley, the area was pretty wide open for agricultural grazing before housing and everything after World War II.

So from the '20s to about '47, there's pretty much nothing going on here other than the agricultural and grazing process. There's a few little houses here and there in the '50s -- early '50s, and then by 1954, the school was constructed.

Another thing that we look at when we talk about the Phase 1 is we talk about what was going on here at the campus that might impact the site environmentally. For example, is there an auto shop, like if it was a high school. There was never an auto shop on this campus, so that wouldn't be one of the things that we would have to worry about.

Once we get all this historical information, we put it together. We figure out, okay, what are the possible impacts or contaminants that you might find from either agricultural processes, herbicides, pesticides, things that may be applied when the school was here as well, you know, to keep the weeds down, or to keep, you know, just in general for maybe through the kitchens and pesticides, I doubt it, but we go through all that.

Lead-based paint for being an older campus, it probably had led-based paint because that's what they used back in the '50s, and then they quit using it back by about the '70s.

So after we've determined all that, we do the preliminary environmental assessment. Now in this case, we do coring through the asphalt, collect soil samples throughout the campus. The areas that are going to be used for construction, we collect samples.

We run it for different constituents, and we get the results. And once we get the results, then we go to the removal action work plan if it's necessary.

So kind of tough to see, but we took 64 preliminary samples, and then we did another 38 step-out borings. These borings were throughout the areas where the development's going to be occurring, where there is additional construction.

When we did that, we had some results that came up positive. We had to take care of some -- we had to take care of impacted soil, which was part of the remedial action work plan.

So three areas came up: One up there at the top, a small area in the classroom area, and then close to the center circle there came up with different constituents.

We estimate in the removal action work plan is, okay, how are we going to address this? What are we going to do?

The soil that we are talking about is in the upper half-foot to a foot. So during construction process, we're going to have to remove that soil after we remove the asphalt or concrete in certain areas.

And then they remove the yardage, and we cover the stock piles or load it directly into trucks, make sure that material is removed from the site. And that's basically how we handle these activities during construction.

So here are some raw excavation areas. This is more of a closer look. Again, this is the -- I guess, the area that's close to where the gym is. You can see all those samples we took there.

Some of them were for step-out purposes. These were the areas we're like, okay, if you have a little bit here and keep going.

Again, all of it was above one foot, so it's underneath the asphalt in the upper one foot, and it's estimated about 1,189 yards. If we take out maybe the southern third. Again, we didn't have any hits in the northern part, but that's what we had.

And here we have a little area approximately two yards would be in between the classroom, and I think it's a little lunch area there. Again, under asphalt.

And then finally not even a yard near the area by the circle, and that's about it.

Next we'll talk about -- Gwenn here will be talking about the CEQA process.

MS. GODEK: Hello, everybody. Thank you all very much for taking the time to come here tonight. Public participation is particularly important to the CEQA process, so I'm very glad to see you.

CEQA, as has been mentioned, stands for the California Environmental Quality Act. So basically if I was to sum it up in ten words or less, I would say CEQA is an objective process intended to identify and disclose and mitigate impacts.

It was enacted by the legislature in 1970, right about the same time as the National Environmental Policy Act, which it is patterned after, also right about the time of the first earth day.

It is governed by three things. There is the statute, the law that rules over it; there's the guidelines that tells CEQA practitioners such as myself how we should implement this process; and then there is the court which is kind of the de facto enforcement agency.

CEQA is really self-policing. Where agencies get into trouble is if they are not living up to their obligations under CEQA, they have the threat of a lawsuit.

So basically what this line is telling us is that as a government agency, pretty much anything that L.A. Unified does with our facilities as far as construction work, upgrades, demolition, things like that, is subject to this law. So we're required to comply with the California Environment Quality Act.

So the purpose of CEQA is to inform the public, which we do through things like community meetings, and providing notifications when documents are available for review.

Reducing or avoid impacts which is done through the introduction of mitigation measures or compliance with regulatory requirements. The school district actually did a program wide EIR, environmental impact report, for all of these comprehensive modernization projects and the other projects that are being implemented under that bond.

And so as a result of that, we have standard conditions of approval that are assumed to be implemented with any project that is implemented under this program, so these are things that we just do as a matter of course.

Communicate transparently, all of our studies are made available to the public for you to review and comment on. Foster a participation in the planning process. So, again, this is the first of two CEQA meetings that we will have, and then the district has also had several design meetings and such, so that we can reach out to the community that's going to be the most affected by this project and get your input on what would make it the best project possible.

We also facilitate interagency cooperation, so different entities that might have an interest or some sort of approval authority over what we're doing, we engage them early on in the process because if there is some requirement that we need to be aware of, it's, obviously, easier if we know about it early on.

And then should -- at the end of the process, should the project have environmental impacts that cannot be mitigated to a level of insignificance, then at the end of the day, there is a disclosure document that explains why the project may be approved despite the fact that it has these environment impacts. So it explains to the public why the board would make that decision.

So once the Board of Education approved us to do due diligence for this project, the first thing that we did was we commissioned certain technical studies that support the findings of our CEQA process.

So we did an air quality study, a culture resources study which specifically looked at the historic nature of the campus, noise and traffic.

So our initial study looks at 19 different issue areas. It's basically a big checklist with like a hundred some odd questions in it related to each of these different issue areas, which I will describe in detail further on in the presentation.

We determined at the end of the initial study process that an environmental impact report was the appropriate level of review to do for this project because of potentially significant and cultural resource impacts.

So the way this process is going to unfold for CEQA is the notice of preparation was published on November 3rd, and that opened up a public comment period where our document is available for 30 days for you all and the agencies to review and provide feedback on.

Tonight is the community meeting.

And then we're anticipating that sometime around April of 2018 is when we'll be ready to take this to the Board of Education for their consideration. These dates are best estimates at this point. Sometimes as the process unfolds, things come up, and these dates slide around a little bit, but that's what we're expecting.

So in that initial study checklist with all of those questions, those questions are always answered one of four ways: Either the project would result in no impact, meaning it won't affect that resource area in anyway; a less than significant impact, meaning there may be some impact, but it doesn't exceed any thresholds.

A less than significant impact that can be made that might have been potentially significant, but has been reduced to less that significant through the incorporation of mitigation measures.

And then a significant and unavoidable impact, which means despite all of your best efforts, you're still going to have a significant unavoidable impact.

So the findings of our initial studies said that all of the environmental impacts would result in either no impacts, less than significant, or potentially significant impacts.

And these were the issue areas where we said the project would have no impact, and then I think it will probably make sense: Agricultural, biological resources, land uses and planning, mineral resources, population and housing, and travel cultural resources which is a fairly new issue are that has been introduced into the CEQA initial study as of this year.

So we determined through the study that there would be less than significant impacts with all of these issue areas. I'll just run through them quickly: Aesthetics, air quality, geology and soils, greenhouse gas emissions, hazard and hazardous materials, hydrology and water quality, noise, pedestrian safety, public services which include fire services, police services, transportation and circulation, and utilities and service systems.

There was one issue area that we determined needed additional study before we could make a determination on whether or not there would be any significant and unavoidable impacts, and that was culture resources, and this pertains specifically to whether or not this campus will still be considered eligible as a historic resource after the project is implemented.

So when we come back out here with the draft DIR, that's going to be the main subject of the study that we've been doing.

And so if you want to actually review a hard copy of this document, it's available at these locations. If you prefer to review it in the comfort of your home, it's also available online.

Your project manager for this is Ms. Linda Wilde, standing over here, so any comments that you want to make, that you want to submit, will be to her attention.

And you can also e-mail them to -- we have a general mailbox for CEQA comments. That way nothing ever falls through the cracks if somebody is on vacation or something, so -- but we do get comments for any of our documents that are up for review on this website, so please, if you do use it, write "SOCES comp mod project" in the subject line. That will help us make sure we flag it appropriately.

And so that's the end of my presentation. We're now at the fun part of question and answer.

And, yes, so these are comment cards. If you do not feel comfortable speaking in public or if you want to bring one home later because you think you might think of something later that you want to say, this has all the information about where to submit the comments. So you're welcome to take a stack of them if you want to give them to your neighbors who couldn't make it tonight. This is one way to submit comments.

Again, we've got somebody here taking notes, so everything you say, we will be going back and looking at and determining whether or not our document needs to be adjusted in any way to reflect what we've heard tonight.

MS. WILDE: Okay. So would our panelists come on over and take a seat. We're going to start Q and A.

All right. So does anyone have questions, comments, input? We're going to ask that you state your name because we did hire a court reporter to take in all the notes and comments and everything, so that we could have them as a historical record for this project. So please, we're going to ask you to state your name.

MS. HOUSEWORTH: Was that done at the previous meeting?

MS. WILDE: No.

AUDIENCE: Hi, my name is Jennifer Rosario, and I have a fifth grader here. I have two questions. Hopefully, I can ask them both.

The first is about asbestos and at what point you do testing for that and how that gets handled. I didn't hear it mentioned in the environmental issues.

And I ask because I come from a school district that had a disastrous modernization program, Ocean View, where it had a really heavy impact on elementary schools in our district before I moved here.

And then the other one is about energy. And also I didn't see anything in the plans that talked about anything -- if you were going to release certification, if there's any sort of energy improvements that you're making, especially in the area of the Valley that we live in. It is so hot. And, you know, I saw several parts where you can put solar panels, if anybody could talk about.

MS. GODEK: So regarding the asbestos testing, the district has a group of -- a team of people. They're called the Facilities Environmental Testing Unit, and they're responsible for making sure that any lead or asbestos issues are identified and abated before construction starts.

They do that under the oversight of my department, the Office of Environmental Health and Safety. We review all of their reports and make sure everything has been done in compliance with all of the different regulations that are out there.

So we have very strict procedures in place. We have bulletins and guidelines and reference guides. We use a whole slew of things to make sure that we're doing this in a safe way possible.

AUDIENCE: But none of that testing has been done yet, it happens later on in the process.

MS. GODEK: No.

MR. DAHDUL: No, because it's on the buildings that we will eventually be demolishing, and so we'll wait until --

Yeah, so the school district requires that it will be meeting CHIPS standards in terms of sustainability. So what that means is that there are a number of -- people might be familiar with LEED -- it's a similar process to the input that's done for schools.

So it -- there's in terms of gas in the materials, Title -- you know, meeting and receiving Title 24 energy requirements. The building is under all of those requirements. So the building -- all of the project will be under the CHIPS requirement.

AUDIENCE: What does that stand for?

Collaborative for High Performance Schools.

MR. QUAN: Thank you. So, yes, it's specifically designed for schools.

And in regards to photovoltaics and solar panels, those are not in the project right now, but one of the requirements that the district places on us design-wise is that it can -- the buildings can take and receive so there will be conduits that will go to the roof. So photovoltaics can be put in, in the future on the roof, if it can be -- the building can accommodate that.

AUDIENCE: Hi, my name is Dean Brynildsen. I live on Yolanda Avenue, 6343, been there for about 20 years, a little over 20 years.

As far as homeowners immediately around here, can be the elephant in the room, is traffic. And what has been done to study the effect of -- you've done a beautiful job here. I want to point out the gymnasium that impacts where I live.

But what have you done to study traffic flows during the busy times in the morning and the afternoon, and what you've tried to do to help us, collectively.

And then I have a comment about where the gym is located, and I know, you know, I got the ace. I pulled the ace out, and I got the gym right across from my house.

But have you studied when you have high school basketball games what the traffic and parking is going to be, the in and out in that area around the gym on weekends and during sporting events?

MS. GODEK: Well, the CEQA team early on when this project was identified, we met with the L.A. Department of Transportation, and kind of talked about the comp mod projects and what they entailed.

So fixing problems with traffic circulation isn't one of the goals of the Comprehensive Modernization Program. They are very firmly looking at things like safety issues, seismic issues, things like that. That's where the dollars are really being focused.

But we did try to take advantage of the fact that we were doing these big projects, and we hired traffic engineers to come on board and do a circulation study.

Because we are not increasing the number of students on this site, we didn't trigger a full-blown traffic study. We went through LA DOT's normal process. If we were bringing a bunch of students and creating a bunch of new trips, that would have required us to do a more significant traffic study.

But even though that wasn't triggered by this project, we still did have it analyzed, and looked for any opportunities we could find to improve situations.

But we're not moving the drop-off zone, and we're not changing where the main entrance is. So really the post-project conditions here are going to be very similar to the existing conditions here.

AUDIENCE: Okay. Then during construction, I'm assuming we'll have some big trucks here. Where are they going to come and in and out of campus, and what time of day. You know, those of us impacted, want to know some of the detailed logistics.

MR. DAHDUL: So during construction, we're going to do everything we can to keep traffic -- or the trucks coming in off of Victory. There might be -- the trucks coming in off of Victory, as much as possible.

During the gym construction, there might be some trucks that will need to access through the parking lot, but as much as possible, we're going to focus in on bringing them off of Victory.

AUDIENCE: Hi, my name is Karla Serap. I live across the street for 28 years. It's really nice to have a nice addition to the neighborhood.

Two things really affects us as neighbors. One is the construction noise. And the fact that in the past when they modernized the lab, they have no concern about their neighbors.

They drill till 10:00 o'clock at night, and it's right across from my house. And nobody we can call, so we called the police. They say, "It's not our business." We called the school police, "Not our business."

So I'm surprised when you said that you did a study, and noise is not an issue in your study. How can it be not? It's three years, two and a half years of construction in this area, and we need some kind of a control on construction timing.

MS. GODEK: So all of the district's projects are required to comply with the noise ordinance of the city, so they should not be doing work until 10:00 p.m. That's beyond.

They're also -- the contractor, is supposed to have very clearly posted contact information, so if there are neighborhood complaints, there is somebody to call. We also require that the contractor work very closely with the school administrators, so if you're having trouble reaching them directly, if you have any connection with the school administrators, they should have a direct line to these contractors.

And our community relations people are involved throughout the process, so keep Teresa's number handy, and if things are going on that make you unhappy with the construction site, give her a call. She's very good at resolving these issues as they come up.

AUDIENCE: Thank you. It would help if you would put up some kind of a, you know, phone number or something somewhere, so that we all can use that phone number because these construction workers don't have always somebody on top of them.

MS. GODEK: So I mentioned those standard conditions. That is in our standard conditions is that the contractor makes themselves available for these calls.

AUDIENCE: Okay. And the second question is when you do demolition, what kind of a contaminate do you think it's going to be airborne? And what are you doing about it?

MR. DAHDUL: Well, so during demolition, and I think somebody pointed out that for asbestos, we make sure that it's all abated prior demolition, so there's a special subcontractor that goes in to remove any asbestos-related material, so none of that would get airborne.

Additionally, when they do the demolition, you know, they'll follow best practices in regards to watering down any of the materials, so that they don't become airborne.

AUDIENCE: Thank you.

AUDIENCE: Hi, my name is Donna Marie Baker, across the street here.

First of all, in the previous modernization that she's talking about, they removed all the asbestos, supposedly. And that's the construction she was talking about. It went on till 11:00 at night. I had to call the police, and they didn't have a permit, and it was huge sound for days.

And finally I called the police, and they had them stopped, but they still went till 9:00 o'clock. So one thing you guys didn't mention is the time and day of construction. I know that's kind of a sore spot, but you didn't mention anything about what time.

MS. GODEK: So the noise ordinance allows construction until, I think, 9:00 p.m. But as a general rule, our contractors don't stay on the site that late. They usually work typical contracting hours where they are at the site pretty early in the morning, and then leave --

AUDIENCE: How early? You're not giving any times or dates --

MR. DAHDUL: Is the question what day of the week or --

AUDIENCE: Day and night.

MR. DAHDUL: So the City of Los Angeles allows construction to happen between 7:00 a.m. and, I believe, 9:00 p.m., Monday through Friday. I don't recall what the Saturday hours are.

MS. GODEK: 9:00 to 6:00.

MR. DAHDUL: 9:00 to 6:00, thank you. 9:00 to 6:00 on Saturday.

MS. GODEK: So that's when it's allowed.

MR. DAHDUL: That's when it's allowed.

MS. GODEK: And 7:00 to 9:00, 7:00 to 9:00 p.m. on weekdays.

AUDIENCE: Are you sure about that?

MS. GODEK: That's what the noise ordinance says, yes.

AUDIENCE: But that changes.

MR. DAHDUL: It's based off of the City of Los Angeles ordinance, so whatever the City of Los Angeles rules are in regards when you can do construction.

AUDIENCE: Construction ends in the City of L.A. at 6:00 o'clock, not 9:00.

MR. QUAN: No, not for the city, the city of L.A. has an ordinance that allows somebody to work on their home up to a certain period of hour for construction, so we follow that same requirement.

AUDIENCE: This is a school, not a home.

MS. GODEK: It applies to construction in the city, so it's residential, it's commercial, it's public facilities. It just applies to construction within the city boundaries.

AUDIENCE: I know that it's 6:00 o'clock that it's supposed to end.

MS. GODEK: 9:00 o'clock is when the ordinance says it's allowed to go to.

AUDIENCE: Well, the apartments being built over here, they end at 6:00, and I called, and they said people said it was 6:00.

MS. GODEK: Yes. It's at the discretion of the contractor. If they want to stop at 6:00 or at 3:00 or at 9:00.

AUDIENCE: That's not what she said.

MR. HUNTINGTON: Not to interject or not to interrupt too much, Andrew Huntington, with Council Member Blumenfield's office for the city.

Our construction ordinance -- or not construction ordinance, our north ordinance allows construction to go until 9:00 p.m.

It does not allow construction on Sundays, and hours are truncated on Saturdays if it goes until, I believe, 6:00 or 7:00 p.m.

MS. GODEK: 6:00 o'clock.

MR. HUNTINGTON: 6:00 p.m. on Saturdays. It really is -- most contractors do not go that late, but as a rule of thumb, they are allowed to go until 9:00 p.m., but if there are violations, LAPD or Building and Safety will cite them.

AUDIENCE: I have two more questions.

What do you mean when you say "historical resources"?

MS. GODEK: So a historical resource under CEQA is something that is either listed in the national or the

California or local register or is eligible for listing in one of those registers.

So we have somebody who is credentialed per the Secretary of the Interior Standards to come out and do an evaluation of the site and say whether or not it would be eligible for listing in one of those registers. And so it has been determined that this campus is eligible.

AUDIENCE: For historical status or --

MS. GODEK: For listing as a historic resource.

AUDIENCE: Well, what is historic? I don't understand what resource is.

MS. GODEK: So a historic resource is something that is considered special or important and is given certain protections based on either it being a great example of a great architect's work or some association with a significant historic event or some -- there's an archeological component to it.

Unique architectural design, so these are special places that get certain protections from just being demolished. They're determined to have some sort of value.

AUDIENCE: Does this school have that value?

MS. GODEK: Yes, it does. So the question will be answering in the CEQA document is -- you know, so we're, obviously, going to be making changes to the campus. But when those changes are complete, is the campus still going to be eligible for listing? So that's the question we need to answer.

If the answer is yes, it will still be eligible, then we can safely say that the project will not have a significant cultural resource issue.

If, however, if we say after we do this project, you're no longer going to be eligible for listing, then that's when we would say that we have a potentially significant -- or I'm sorry -- a significant and unavoidable impact, and the Board of Education would then have to, if they decide to approve the project, say that the benefits of the project outweigh the significant impact in something that's called the statement of overriding considerations.

MR. DAHDUL: So -- if I may. So in this particular campus, there's not one particular building that is historic or historically eligible. It is the -- basically the way that the site lays out in the kind of a finger cluster, that style of orientation is what makes this campus historically eligible.

AUDIENCE: Okay. So I'd like you to check into see if the asbestos is all out because that's what they said they did in the previous modernization.

MR. DAHDUL: So that -- so typically when we go and touch a particular building, and I think you're referring to the chemistry lab that was recently worked on over here just behind this building that way.

AUDIENCE: It was all the classrooms over there, everything. It went on forever.

MR. DAHDUL: Okay. We'll have to check into it.

AUDIENCE: And then just to add, maybe you could do a water catchment system, which they're kind of asking people to do now when they build homes is put in catchment systems because you use a lot of water here. It goes on for half an hour every single night on recycled water.

MR. QUAN: The campus is -- the project is being held under the LID program, which is a low-impact development. So we will have to show that the water usage is not increased with the design that we're doing. It doesn't mean that you necessarily have to reduce it. It just shows that you're not inconsistent --

AUDIENCE: Well, it's on for a half an hour every night, and that's probably all over the campus. Okay. Thank you.

MS. GODEK: Okay. We've got a question or comment over here.

AUDIENCE: I'm Ralph Leon. Is it possible to list all the construction companies and have some person responsible for each company so we can talk to them and also their experience because, let's say, moving the lead or removing the lead, is this their first job that they're going to do, or -- so for us as the people around here to have a reference, what kind of experience these contractors are. Is this their first job over here?

But mainly contact so we can talk to them directly in case there is a noise, they will be on 9:00 o'clock because they easily break all the rules, and then nobody is responsible.

MR. DAHDUL: Are you referring to the general contractor who is actually building, or are you talking specifically about the asbestos? I'm not sure.

AUDIENCE: All of them, the different contractors. Put a list, a person that we can talk to them.

MR. DAHDUL: So in this particular project, we actually have a contractor and an architect joined in as a, what we call a design build team, and that -- they're actually here today. It's Sinanian Development, and so there's a face to the contractor who would be the one to develop the site, be our general contractor.

AUDIENCE: Thank you. So put the name, so we know the name and the phone number and e-mail.

MR. DAHDUL: Yeah. We'll also have -- I mean, you've got Teresa, who is really the main point of contact from a community perspective. If you have specific comments, she will always be throughout the life of the project.

And then we also have an LAUSD construction manager who will be here during construction that will be the responsible owner authorized representative for the district.

AUDIENCE: Where are those names?

MR. DAHDUL: We don't have one specific person because we haven't started construction yet.

AUDIENCE: No, I mean, the ones you just named. Put them on a list, on a paper, so we can have that.

MR. DAHDUL: Yeah, sure. We can give you the name of the construction manager when construction starts, absolutely.

AUDIENCE: All of them including Teresa.

MR. DAHDUL: Yes, we will do that.

AUDIENCE: How do you do the noise evaluation? How do you study that? How do you do the noise evaluation? Thank you.

MS. GODEK: Yeah, you can -- So and -- and, well, first of all, in regards to the contractors, and it being their first job, the district has pre-qualified lists of contractors. So they're all vetted before they do any jobs with us to make sure that they've got the right experience behind them before we use them, so we're not using anybody who's, like, fresh out of the gate.

So, Alice, maybe you want to talk about the noise study.

MS. HOUSEWORTH: Hello. I'm Alice. I'm the consultant. I helped to write the CEQA document.

Okay. For noise, we basically took the average noise from each piece of construction equipment. We added them all together, and then as you measure out from the center of the construction zone, you decrease noise by six decibels per doubling of distance. I'm not a noise expert, but I did read the document.

So anyway, we have charts, we have graphs, we've got tables in here that show that at the nearest residence, this is the noise decibels, and they are less than the threshold.

We also have federal transit administration, vibration levels for construction equipment, and so that's all in here, and it shows that vibrations would be less than significant. And I have a document up here if you would like to check out the tables.

AUDIENCE: Hi, my name is Abby Ross, and I'm a parent and also a LAUSD teacher. And my question is very different.

I wanted to know about the kids and where are they going when the buildings are demolished? Where are all the elementary school kids going?

And my son will be, like, a senior getting ready for college when this is in the middle of it, so I would like to know how those kids are going to be impacted.

And also, he wants to know is he going to get any of this done before he leaves in 2020. And I said, and if so, what media is going to be finished first that he might be able to use or what's the order of maybe which parts are being met --

MR. DAHDUL: Great question. So I'll answer the first part first. Your question is where are the students going when we start construction?

So it's actually embedded in the phasing. So in general, the new gym and the elementary school building are going to be built first.

While the elementary school building is being built, all the portables that are currently here will be demolished, and we will bring in new bungalows or portables out here over by the tennis courts to house those students during construction.

Once the elementary school building and the gymnasium building are completed, which is around 2020, so I don't know if -- somebody will get the benefit of that.

Once that's done, then the science building, what we're calling Science Building East and Science Building West will be constructed. And then the -- this is where the gym is now, so that will be demolished once the new gym is built.

And then right here, there are four classroom buildings, approximately ten classrooms, I believe. Those students would then occupy this space where the elementary school students --

AUDIENCE: Would it be like the bungalows most schools have?

MR. DAHDUL: It would be a phase. It would be a small little bungalow village, so that way we can phase the construction.

AUDIENCE: Will it be 35 students? Are they going to be bigger bungalows, or it doesn't --

MR. DAHDUL: Depending on the type of classroom. If it's a band classroom, then it would be a bigger one. In general, they'll be 960 square feet each, which is the size of a general classroom.

AUDIENCE: So the gym and then the elementary school.

MR. DAHDUL: They're first, yes. I was just going to say it has to do it that way. You can't tear down the existing science buildings until you build the new gymnasium.

AUDIENCE: You mentioned something -- I'm sorry. Somebody mentioned something about a baseball field, but I remember them before saying no baseball field.

MR. DAHDUL: Sure. So there is no baseball field as a part of this project, but what we heard at the last few times that we've been out here is that at some point, when funding becomes available for the baseball field, they would like to expand the baseball field 30 feet to the south, so that is a regulation.

Right now, I think, from home plate to here is not regulation, and so if you can go down 30 feet, so in all of our planning, we made sure you can see from this line here to this line, there's 30 feet that, if funds became available for the baseball field, particularly, then you could expand the baseball field and make it regulation.

AUDIENCE: Hi there. My name is Doreen. I'm right over here on Yolanda and also an alumni, 2006. I know for a lot of people in the neighborhood, this school can serve as a little bit of a hindrance, and I have a special connection with this school. I'm still, you know, friends with people. I volunteered here for years afterwards.

And so I'm kind of bummed out that this is happening after I leave, but I'm really excited about it. I'm really glad that it's happening because it's really needed here.

While I was going here, parking was a huge problem. Obviously, not for me because I just jumped out my door, and I was here, but a lot of my friends had issues with parking.

And now, it's, you know, over time kids get more cars, newer. And as they go on, parking can go all the way up to Wilbur, and causes a problem for us to park in our own neighborhoods, especially during school functions. Parents will come to our doors and ask if they can pay to park in our driveway because there's no parking.

So I'm wondering if there's any plans to improve parking, and then I see that that center divider is still there on Yolanda for the busses to go in through, which is great because that kind of segues at least a little bit of them from us, but mainly I'm wondering if there is any parking added.

MR. DAHDUL: So we're not touching anything here in terms of the drop-off. The drop-off will remain on Yolanda, so that doesn't change.

We just recently worked with the transportation office, which was occupying this space. We're going to be demolishing that little house that's on the corner and expanding the parking lot further out. So there will be some additional parking once the project is completed.

AUDIENCE: Good evening. My name is Anthony. I'm also a neighbor here on Yolanda. I actually have two questions.

The first is for Andrew Modugno. And forgive me if I missed it, but I believe you mentioned that there was a few areas of concern. Did you mention what those concerns were?

MR. MODUGNO: Yeah. I didn't mention what they were. They were slight elevated concentrations of arsenic under the parking lot areas there. And then a little between one of the classrooms and the lunch area, again, under asphalt. And then one little area, small planter area, with elevated lead.

Again, I say elevated, you have to realize that LAUSD uses numbers that are more conservative then even what the KSC uses, so while most residential has in the 200 milligrams or something per kilogram, we're talking about 80 we had to get down to, and that one concentration was 80.3, so that's basically very minimal, very minimal.

AUDIENCE: Nothing really for us to be concerned with?

MR. MODUGNO: Nothing to be concerned with. We are going to take care of it. We're going to direct load it. We'll make sure that stockpiles are covered so that none of it gets airborne. Like Issam said, that they're going to use the best management practices to keep any dust down for those areas.

AUDIENCE: Thank you. The other question I'm assuming is probably directed to the principal, which I believe he's in the back there.

As a resident here, my main complaint is the -- the lack of respect for the peace and quiet that we don't have living here.

You know, you heard from a couple of the neighbors, and I'm not going to, you know, spend the time going through the list of complaints that I personally have, but the most recent one: This past Saturday at 5:00 in the morning, your alarm goes off, and it went off for a good 45 minutes. Who's holding you accountable? Who's holding you responsible to making sure that we're not being disturbed? You know, that's one part of it.

The second, you know, after-school hours, your sporting events, mainly your football. You know, who's holding the students responsible that are staying in that inlet where the busses get dropped off or the busses park, excuse me, that are there until after 11:00 a.m. having their little gatherings and parties and, you know, making noise for us residents?

Who do we need to reach out to, to make sure that, you know, this is being taken of? Please start with the first one.

MR. PRICE: So as for the alarm, unless I hear from either LAFD or LAPD, I don't know when the alarms go off. I don't have -- there's nothing on my phone that says the alarm is off. So unless -- so the best thing to do would be, I would think, and I don't know the answer, you know better than I, whether they can call L.A. school police --

School police. Because they'll come by, and I can give you that number, or we can give you that number before you leave tonight. So if it does go off -- again, there's supposed to be a signal that gets sent to LAPD, and they are supposed to send a car out, and turn it off. Unless there's a fire, and then the fire department is supposed to show up. As -- so that would be the first one.

The second one is when you asked about the kids, that's on me. So I can give you my number, and you can let me know. We usually try to clear those kids out.

And if you want to give me a wanted list of times, places, events, I'll be glad to look into it.

AUDIENCE: Well, yeah, I definitely want your number and then the school police as well.

And just a couple days ago, just, you know, here's another one of my neighbors. There was a blinding light, you know. I can close my blinds, not a big deal, but coming from the gymnasium, there was this piercing light that was blinking for two nights in a row --

AUDIENCE: That was an alarm.

AUDIENCE: So with all of this technology and wonderful advancement, you mean to tell me that there's no way for you to be notified that your stuff is going off?

MR. PRICE: As far as I know, I haven't gotten a phone call.

AUDIENCE: I have alarm systems and when that gets triggered, I get notified on my smart phone, just a thought. But, you know, those things need to be taken into consideration.

AUDIENCE: That's why we need the list.

MR. DAHDUL: We'll get you your list.

MS. GODEK: Just FYI, school police number, I have it here. I'm just going to say it so other neighbors, if they want to write it down, get your pens out. L.A. Unified school police is (213) 625-6631, (213) 625-6631.

AUDIENCE: Hi, my name Debra Rice, and I know we talked a lot about traffic, but have you put any thought into the actual workers. I -- you know, my husband works somewhere where they were doing a big construction, and they basically took every parking spot you can imagine, anywhere near their buildings.

So what's going to happen those people that are coming here to work?

MR. DAHDUL: Great question. So as part of our process when we reached out to Design Build, contractor, architect community, we asked them as part of our proposal that they were not allowed to park on the streets surrounding the school.

So there will be on-site parking that they're going to have to access within the construction boundaries and their staging area.

AUDIENCE: Thank you.

AUDIENCE: I'm Sean Como. I am a student here, so I just want to give a student perspective on how I view this project. It's not a question. It's just a comment.

I would like to say the ideas here presented show great improvement to this school, and I think it's an excellent idea, especially you took into consideration a lot of things.

Movie nights, of course, we have here already, but I like how you took that into consideration as well as the gym has been needing improvement for a long time.

So from the student perspective, I greatly like this design that you have come up with. And I would like to thank you and, yeah, and my twin has a comment too.

AUDIENCE: I'm Ashley Como. We've been students here since fourth grade, and it's very amazing to see this project. Although, saddening to know, we'll miss it. We'll graduate.

But I'm part of the new culinary program, and we've been struggling a lot with, you know, not having stoves, or -- yeah, just equipment in general.

So seeing the developments of that project, as well as the band room and auditorium, as I've been in band since fifth grade, is very great, and I'm looking forward to seeing the changes and coming back as an alumni and seeing it. So thank you very much.

MR. DAHDUL: Thank you.

There are two teachers here that used to be students, so you can always come back as a teacher.

AUDIENCE: Hi, I'm Ted Warner. I have two students here that are seniors. I have two questions. One, which I brought up a year ago when this project started. It's a little bit different, but one of the things that our kids always complained about is the drinking quality of the water coming through the fountains.

I know you may not be tearing up all the buildings, but if there's something you can do so that it's actually reasonable to drink the water on this campus.

And the other thing is being that they're actually going to be holding classes, how are you going to deal with the lack of disruption, of noise?

And is there any school functions that are going to be temporarily eliminated due to a building missing or space being taken for the construction?

MR. DAHDUL: So the first part in terms of the water, all of the existing water lines that are running to each building will be replaced.

So even though there's no scope necessarily in all of the buildings, we will be running new water lines to those buildings. And we're not going to go into each building that we're -- like, especially the ones on the east side of the campus, the finger buildings. We're not going into those buildings to replace the water lines, but everything leading up to each building, all the water lines in the ground will be replaced.

AUDIENCE: With what kind of pipe?

MR. DAHDUL: It will be copper pipes.

The second question, there will be some noise, obviously, from the construction. We will work with Mr. Price in regards to any testing days as well as any specific school events.

And so the contractor and the district and the school will have to work hand in hand to make sure that we try to limit construction on specific functions that the school has.

AUDIENCE: Hi, I'm Jeff Bannister. I live over on Nico. I am the second vice president of the Tarzana neighborhood council.

We had an earlier meeting today, and there were two points that I wanted to raise again now, that I raised then.

The first is the possibility of noise barriers, especially over here on Yolanda where they're going to be building the gym. You know, despite the decibels that you were talking about, I can't imagine that it's not going to be very loud when they're constructing over there.

You have a $108 million. I think some of that money should be spent on noise barriers. However effective they are, I think it's going to be some improvement especially over there. But anywhere that you are going to be doing construction where there's going to be noise coming into the neighborhood.

The second thing that we talked about was the possibility of putting in a second lane on Erwin, moving the sidewalk back a little bit so that there would be a second lane that could be used for drop off, so I'd like you to talk about that, please.

MR. DAHDUL: You want to answer the noise question?

MS GODEK: Yes. So going back again to those standard conditions of approval that came out of program EIR that we did for this -- the EIR being the environmental impact report.

We do include standard conditions related to noise that say that if barriers or noise-mitigating walls of some sort are necessary, that they will be installed.

So we do have that in place where that's one of our standard procedures is, you know, if construction is going on, and you're being impacted by it, you let Teresa know, and we say, you're right, this is in excess of the threshold, we will put up barriers at that point if they aren't there already.

AUDIENCE: Are they planned now or --

MS. GODEK: It's still too early on to kind of -- we don't have things at that level of detail yet. But we do look at the sensitive -- they're called sensitive receptors when you do the studies. So we do look at the proximity of the construction activities to sensitive receptors.

And if we think that the noise is going to be too loud, we actually have a much lower threshold for noise in our classrooms then we do in other spaces for obvious reasons. So that's all stuff that's covered in the standard conditions. And those are also the website where our CEQA documents is available here, also has the program environmental impact report, and the standard conditions, and all of those things, if you're interested.

MR. DAHDUL: In regards to the question about the drop off. So when we -- early -- early on when we first started this and we were scoping the project, we did look at the addition of a drop-off zone in front of the school off of Erwin.

We find that that an internal drop off or a -- you know, a lane, a curb cut, is somewhat of a blessing and a curse because those cars do have to merge back onto traffic.

So the decision was made after looking at it from a logistical standpoint that did not necessarily make sense for us to proceed with that as part of the scope.

AUDIENCE: How about putting in an entire lane for the full length of the school? Putting in, you know, just moving everything back from the east side clear to the west side of the school.

MR. DAHDUL: That is not something we necessarily studied, but I can tell you that just off the cuff, that would be very, very difficult to do. In regards to -- you would have to move the entire length of the sidewalk also over.

And you do have -- now you're looking at it being very, very close to these buildings.

MS. GODEK: And possibly relocating utilities. There's power lines and sewer drains, and things like that, and you start to look at a mighty big project to do something like that. Mucho dinero.

AUDIENCE: All right. A question from the parents. My name is Lubar Rosenthal, and this is my friend. We have a team question. This looks amazing. Thank you. We are grateful for the opportunity for our children to go to -- in the future to go to such an amazing school.

I have personally three children, and there are three of them in the fourth grade, so this is our first year.

So I have a lot of concerns, health concerns. Unfortunately, I didn't see a lot of parents here, mostly neighbors, and people that live around. I understand you have your own concerns.

My concerns are health issues, and I was hoping to hear more exact plan of how the construction will be implemented. I don't really understand. And I'm not an architect. I don't really understand how physically it's possible for kids to go to school every single day from Monday through Friday, and the construction being on during the same hours.

And I apologize. Maybe it's a silly question, but I just don't understand that.

MR. DAHDUL: It's a good question. So I guess two parts to two answers. One is before we start construction, we'll come back and have a preconstruction meeting where we'll talk more in depth of this is the area for construction, this is how we're going to fence it off. And our contractor and our construction management team will get more into the details.

We're still in design, we still have some time before we have to submit the drawings to the Division of State Architects to get approvals.

So we're not necessarily starting construction on any of the new buildings, definitely not in 2017. If we're lucky, maybe at the end of 2018, probably not.

We are looking to bring the temporary housing towards the end of -- middle to end of 2018.

AUDIENCE: Can you be more specific about temporary housing? How is it going to look like?

MR. DAHDUL: They are bungalows. Like the portable buildings, they come in off of a truck, and they get placed.

They're not constructed on site.

AUDIENCE: So will they have air condition?

MR. DAHDUL: Yes, they will. And they'll be 960-square-foot classrooms for the students that are in the portable buildings now. It will be very similar to what they're in now, except newer.

The second part of your question --

AUDIENCE: Health concerns.

MR. DAHDUL: The health concerns during construction.

AUDIENCE: Safety. Safety.

AUDIENCE: Hi, my name is Leanne. I have a fifth grader at this school, so we are concerned about the kids will be exposed to the dust from the construction, the smell from the paint, and the clay, and all the chemicals and toxins released during the reconstruction.

And they are kids. They have developing lungs, so we are very concerned about their health impact, and, you know, everything that's related to that.

So is there any plan how to protect them? Is there anything that can be done?

MS. GODEK: Yes. So the district has a lot of best management practices or BMPs that we will be enforcing on this.

First of all, the construction areas will be completely fenced off, so the students will not have any access to where there is ongoing work.

And second of all, during demolition and things like that, that have the potential to generate dust, there's best management practices for not doing work when the wind is over a certain miles per hour, or watering the soils to make sure that they stay damp, and they stay on the ground, and they don't float off the site.

And so these are all things that are promulgated by the South Coast Air Quality Management District, so we follow all of their requirements to make sure they have a fugitive dust regulation that we follow. So we make sure that we contain all the dust to the maximum extent possible.

And then -- and, like I said, the asbestos and the lead, and all of those things will be abated prior to construction, so there will be no potential -- when we do these lead and asbestos abatements, these buildings are completely enveloped in plastic. There's no potential for exposure during the abatement process.

So that's another way that we make sure everybody is safe.

AUDIENCE: But the construction will go during the school days; right?

MS. GODEK: There will be construction during regular school days; that is correct.

AUDIENCE: Is there any plan to do some of it, the most dangerous healthy risky things during the summer break, let's say winter break?

MS. GODEK: Yes. We do try -- we do try and stagger activities that have the greater potential to have impact when school is not in session. We do that to the extent that we can.

AUDIENCE: So that has been taken into consideration during the school breaks?

MS. GODEK: Oh, absolutely.

AUDIENCE: Great.

MS. GODEK: Yes. When the district meets with the site administrators and all of these people who are here on the site and are going to be impacted by this, they also provide us feedback, and so we listen, and we respond.

MS. AKINS: Okay. It's fast approaching 8:00 p.m., so we're going to take two more questions on the mic. Our professionals up front will be here for a couple minutes after the meeting. I will leave business cards and contact information in the back, and we've got two more questions.

AUDIENCE: Hello, my name is Jacob Rovani. I live on Del Amo Street, right up the street here. I had two concerns. One concern was in regards to the noise.

I understand the decibels and everything, but who do we contact if we feel that the noise is exceeding the limits that you guys are providing?

MS. GODEK: So once the project is in construction, you're welcome to contact Teresa, she's probably about to hand you a business card.

And then we should have the contractor's information posted on the fencing around the site, so there should be a contact -- a direct line to the construction contractor that you can use.

And then the district also has an on-site, what is referred to as an owner's authorized representative. So they're the district's liaison between the construction and the district, and they're also a good source.

AUDIENCE: Okay. Thank you.

My second question is, obviously, as you know, all of our neighbors have been bringing this up in regards to the traffic.

What I want everyone to realize up there is that this is an issue we're having in our neighborhood. And I understand that you guys came on this project. You might not have been aware of it, or whatever the case may be, but I'm here to notify you guys, and I believe that we notified you in the past, that this is an issue.

And I want you guys to address it. Just by you guys saying, "Oh, this is not a concern for us," you mentioned earlier that the reason that maybe you're not addressing it is because it might not be a safety issue, but this is actually a safety issue.

The reason it is a safety issue is I, myself, along with all my other neighbors, we live on a cul-de-sac. There's only one way in and one way out.

When this school closes, and the kids leave, all the kids get picked up, mainly on my street. They double park. If there is a issue on my street, I'm not able to get out, and no one is able to get in, so it is a safety issue.

You guys do need to be aware of that, and it needs to be addressed. And, yeah, it needs to be addressed now, and we need to have a resolution.

We understand that you guys are our neighbors. We're your neighbors also. We want you guys to be respectful of us, and we will be respectful of you guys. I understand you guys are trying to do work on your project, no problem. But you need to be aware of our situation.

You know, you guys -- I understand that you guys spent all this time and money and effort doing what you've done right now, but I'm telling you it's -- it's going to be an issue, and I'm going to make sure it becomes an issue if you guys don't address it.

I'm telling you right now. I want to work with you guys. We all do, but I want to make sure it's going to get addressed, and I want you to be aware of that.

MS. GODEK: Thank you.

AUDIENCE: Hello. This is Mario Masvero. I'm a neighbor. And couple questions. Basically the current schedule, when do you anticipate construction starting? And maybe you can answer that first.

MR. DAHDUL: So as I've mentioned, the temporary housing, the portables, we're looking at some time at the middle to end of next year.

AUDIENCE: And second question, I heard you're going to Design Build, is there something built into that contract to incentify you guys to get this job done as quickly as possible, so that there won't be such disturbance to us, you know, neighbors here. So it's going to take like two to four years. I would love to hear that there's something in your contract that says if you get it done in two, you get something.

MR. DAHDUL: There's no incentive, necessarily. Although, as part of our contract there is a set number of days that we reviewed that the contractor has committed to in terms of trying to complete the project.

And as supported, it's in the contractors' and architects' interest to get the project done as quickly as possible.

Thank you, everyone.

MS. GODEK: All right. So we're going to close the meeting. We've got comment cards available, if you didn't want to speak on the mic, or we ran out of time. You can write your comments out and give them to me before you leave, and I'll make sure they are in the official meeting document. Thank you.

(Whereupon the public meeting was adjourned.)

REPORTER'S CERTIFICATE

I, Kelly Rayos, a Certified Shorthand Reporter within and for the State of California, do hereby certify:

That the said public meeting was taken down by me in stenotype at the time and place herein stated, and was thereafter reduced to print by computer-aided transcription under my direction.

I further certify that I am not in any way interested in the event of this action and that I am not related to any of the parties thereto.

Dated this ______ Day of _____________, 2017.

____

Kelly Rayos, CSR No. 13502

COMMENT CARD / TARJETA DE COMENTARIO
Public Meeting / Reunión Pública

SOCES Comprehensive Modernization Project
Modernización Integral de la SOCES
November 8, 2017 / *8 de Noviembre 2017*

Name / Nombre: Jennifer Osono

Affiliation / Afiliación: SOCES parent

Address / Dirección: [redacted]

Comments / Comentarios: Plans look good, I like the nod to mid-century design with the sloped roofs. Disappointed that there doesn't seem to be more done to improve the energy efficiency of the building (solar panels, one [illegible] example) →

Written comments must be received no later than December 3, 2017 at the following address:
Los comentarios por escrito deben ser recibidos a más tardar el 3 de Diciembre de 2017 a la siguiente dirección:
LAUSD Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor, Los Angeles, CA 90017
Attn: Linda Wilde, Email "CEQA-comments@lausd.net"
Please include "SOCES Comp Mod" in the subject line / Incluya "SOCES Comp Mod" en la línea de asunto

they could be put over parking or the lunch canopy, or at the entrance pavilion)

Also the parking/dropoff/pickup issue is real, not just for neighbors, but for parents. We have to get here 30-45 minutes before the bell to find parking within 1/4 mile, it's crazy

COMMENT CARD / TARJETA DE COMENTARIO
Public Meeting / Reunión Pública

SOCES Comprehensive Modernization Project
Modernización Integral de la SOCES
November 8, 2017 / *8 de Noviembre 2017*

Name / Nombre: Jeffrey Mausner

Affiliation / Afiliación: Fa Neighbor, Tarzana Neighborhood Council

Address / Dirección: [redacted]

Comments / Comentarios: Please minimize noise, dust, & traffic. Use noise barriers to minimize noise in surrounding neighborhood.

Written comments must be received no later than December 3, 2017 at the following address:
Los comentarios por escrito deben ser recibidos a más tardar el 3 de Diciembre de 2017 a la siguiente dirección:
LAUSD Office of Environmental Health and Safety
333 South Beaudry Avenue, 21st Floor, Los Angeles, CA 90017
Attn: Linda Wilde, Email "CEQA-comments@lausd.net"
Please include "SOCES Comp Mod" in the subject line / Incluya "SOCES Comp Mod" en la línea de asunto

Appendix C-1.

2017 Historic Impact Analysis Report

Sapphos
environmental inc.

April 6, 2017
Job Number: 1498-036
Sherman Oaks Center for Enriched Studies
Impact Analysis Report

MEMORANDUM FOR THE RECORD
2.6 1498-036.M01

TO: Los Angeles Unified School District
(Ms. Debi Howell-Ardila)

FROM: Sapphos Environmental, Inc.
(Mr. Donald M. Faxon)

SUBJECT: Impact Analysis Report for Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, California 91355

ATTACHMENTS:
1. Project Location Map
2. Current Project Proposal Plan
3. Resumes of Project Personnel

Corporate Office:
430 North Halstead Street
Pasadena, CA 91107
TEL 626.683.3547
FAX 626.683.1745

Billing Address:
P.O. Box 655
Sierra Madre, CA 91025
Web site:
www.sapphosenvironmental.com

EXECUTIVE SUMMARY

This Memorandum for the Record documents the Impacts Analysis Report to be undertaken to complement the 2017 Historic Resource Evaluation Report (HRER) for the Sherman Oaks Center for Enriched Studies located at 18605 Erwin Street, Tarzana (neighborhood in the City of Los Angeles), County of Los Angeles, California. The property is owned and administered by the Los Angeles Unified School District. The Impact Analysis Report resulted in seven key findings relevant to the planning, construction, and operation of additional facilities:

1. The campus, its 1954 era classroom buildings, and its original landscaping circulation features all retain integrity and are eligible for listing in the California Register of Historical Resources as a historic district. Therefore, the property is an historical resource for the purposes of Section 15064.5 of the California Environmental Quality Act Guidelines. Demolition of four buildings, structures, and historic finger-plan elements identified as contributing elements to the District, would eliminate up to 25 percent of the campus historic district and constitute a substantial adverse change pursuant to the California Environmental Quality Act.

3. Demolition of buildings that were elements of the original campus design, and the construction of a Science Building and associated landscape elements, would both need to be assessed for the ability to comply with the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for Preservation, Restoration, Reconstruction, and Rehabilitation*.

4. The demolition of the 1953 Physical Education Building appears to impose less of an impact, as it sits at the edge of the historic circulation plan, contributes less to the plan, and is of limited architectural merit as an individual component.

5. It appears to be feasible to retain the eligibility of the proposed district for listing the California Register of Historic Resources through the accomplishment of several design parameters:

    - Retention of both the orthogonal "finger" and radiating "cluster" components of the historic campus core plan, its hub, and its buildings

    - Construction of new buildings is encouraged outside of the historic campus core, to the north and northeast of the contributing historic classroom buildings, landscape features, and circulation design.

    - Design of new construction of buildings, hardscape, and landscape should be consistent with the Secretary of the Interior's *Standards for the Treatment of Historic Properties and Guidelines for Preservation, Restoration, Reconstruction, and Rehabilitation*.

6. Areas of contributing and/or non-contributing buildings that are least likely to impact the core design of the historic campus plan include: non-contributing Portable Buildings Nos. 30, 31, 33, 34, 35, and 36; contributing buildings 25, 26, and 27; and the aforementioned Physical Education Building. The cumulative adverse change—the percentage of historic fabric loss—of the removal of any or all of these buildings would need to be re-calculated given a formal construction project proposal.

7. Mitigation measures include: minimizing new construction below the circulation area south of the Physical Education Building; preserving the finger plan and cluster plan circulation areas and related structure and landscape components; and designing new construction within the compatibility guidelines provided by: the Secretary of Interior's *Standards for the Treatment of Historic Properties*;[1] Preservation Brief 14, New Exterior Additions to Historic Buildings;[2] and Preservation Brief 17, Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid in Preserving their Character.[3]

INTRODUCTION

In January of 2017, the Los Angeles Unified School District (District) contracted Sapphos Environmental, Inc. to conduct a Historical Resource Evaluation report (HRER) in support of the Sherman Oaks Center for Enriched Studies (SOCES, historically known as "South Reseda Junior High School"). In February of 2017 the District contracted Sapphos Environmental, Inc. to conduct an Impact Analysis to address the general concept plan ("Concept 2") proposed for the school. Opposing opinions have been provided as to whether the campus is eligible for the California Register of Historical Resources (CRHR) as a historic district. An evaluation by PCR Services Corporation in June of 2015 found the campus not eligible;[4] a less intense assessment by SurveyLA in July of 2015 suggested it was potentially eligible.[5] Buildings and structures that are individually eligible, or collectively eligible as a district, must be treated as historical resources pursuant to Section 15064.5 of the California Environmental Quality Act (CEQA) Guidelines.

As a result of the HRER, Sapphos Environmental, Inc. determined that the SOCES campus to be eligible for listing in the CRHR pursuant to Criterion 1. The campus was determined eligible based on the integrity of the historic material as exemplification of an intact, low-massed, postwar, indoor-outdoor, finger-and-cluster hybrid plan school consistent with the criteria established in the District Historic Context Statement. The campus exemplifies District design ideal and principles of the era. Therefore, the property is an historical resource for the purposes of Section 15064.5 of the CEQA Guidelines.

This Initial Study Impact Analysis Report (IA) is intended to provide an advisory opinion, based on substantial evidence, as to whether a proposed general concept plan known as Concept 2, or similar projects, which proposes to demolish and replace the Physical Education building and four classroom buildings, identified as contributing element to the historic district, would cause a substantial adverse change to the eligibility of SOCES for listing in the CRHR as an historic district.

The review is based on a site investigation of the property; literature review and online research; and an application of federal, state, and local register eligibility criteria. The two prior evaluations of the property were thoroughly reviewed and the factual data in the respective evaluations were considered in this HRER. The campus was surveyed for the District by Sapphos Environmental, Inc. and the survey

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[1] National Park Service, U.S. Department of the Interior. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Available at: https://www.nps.gov/tPS/standards/four-treatments/standguide/index.htm

[2] National Park Service, U.S. Department of the Interior. *Preservation Briefs*. Available at: https://www.nps.gov/tps/how-to-preserve/briefs.htm

[3] *Ibid.*

[4] PCR 19 June, 2015 *Memorandum of Preliminary Historic Evaluation Report (HRER) for Sherman Oaks Center for Enriched Studies*.

[5] Survey LA 2012 *Reseda – West Van Nuys Community Plan Area*

results were included in the Programmatic EIR associated with the 2014 District Historic Context Statement.

PROPERTY LOCATION AND DESCRIPTION

SOCES is located at 18605 Erwin Street, in the Tarzana community planning area of the City of Los Angeles., in the County of Los Angeles, California (Attachment 1, *Project Location Map*). Lying approximately 14.75 miles northeast of Los Angeles City Hall, SOCES is sited on Tract No. 13670, lots 7 to 26, roughly bounded by Victory Boulevard to the north, Reseda Boulevard to the east, Erwin Street to the south, and Yolanda Avenue to the west. The campus comprises approximately 37 buildings and structures, 30 of which are considered permanent, along with playing fields, playing courts, and landscaping features.

The campus design is defined by a finger-and-cluster hybrid plan circulation design. The SOCES example employs a central entry axis that divides the plan into two halves; both sides, east and west, rely on the central entry axis as the point of departure for students and staff. The eastern side consists of concrete pathway "spokes" leading to individual classroom buildings that radiate southeast from a central concrete stage "hub;" it employs concentric curves to provide eases of circulation by providing a connection with the spokes. The western half of the plan encompasses pathway fingers and classroom buildings that project to the west. Both sides rely on the central entry axis as the point of departure for students and staff. This circulation and building plan dominates the entire southern half of the SOCES campus property; the Physical Education Building and athletic fields dominate the top half of the SOCES campus and do not continue the historic circulation design pattern.

METHODOLOGY

Sapphos Environmental, Inc. (Mr. Donald Faxon) completed a site visit of the SOCES to document known character-defining features and to analyze potential impacts of the project concepts submitted to Sapphos Environmental, Inc. A digital photographic record of the resources at the school was compiled. Findings from the HRER, including the list of character-defining features, were analyzed and research performed. At the District's request, Mr. Faxon provided initial, general opinions pertaining to where the most serious potential impacts may occur. These advisory opinions were provided in e-mails and by phone conversations that took place from February 6, 2017 through February 27, 2017. This Impacts Analysis will address both the impact of the proposed demolition, and the visual impact of the new construction, within the limitations of the information provided.

IMPACTS ANALYSIS

Threshold

Under CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. Substantial adverse change in the significance of a historical resource is defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. The significance of a historical resource would be materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR, a local register of historical resources pursuant to Section 50.20.1(k) of the Public Resources Code, or historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code.[6] In general, a project that follows the Secretary of the Interior's *Standards for the Treatment of Historic Properties* and associated guidelines shall be considered as mitigated to below the level of significance.[7]

Character-defining Features

The investigation completed in the HRER confirmed that the primary SOCES campus, including planned circulation elements and covered walkways; original landscaping; concrete stage; brick walls; surviving pipe rails; and all contributing buildings: (Administrative Building; Counseling Building; Library; Auditorium Building; Cafeteria; Student Store; Choral Music Building; Instrumental Music Building; Industrial Arts Buildings 1 and 2; Classroom Buildings A, B, and C; Sanitary Building D; Arts and Craft Building; Classroom F; Homemaking Building G; Classroom Buildings H, J, L, and M; the Physical Education Building; the Lath House; Agricultural Building; and Utility Building) is an intact 1954–1955 campus core design eligible for the CRHR as a historic district. The SOCES campus core design displays an emphasis on strong design intent over use of high-style materials. Character-defining exterior features of the campus include, but are not limited to:

- Low-massing (1-story)
- Decentralized hybrid cluster- and finger-plan site design
- Asymmetrical plan with radiating paths and concentric arcs
- Rhythm of building placement and spatial relationships
- Primary south-north entrance axis
- Indoor-outdoor connections and relationships
- Wide concrete pathways
- Round, low concrete podium "hub"
- Canopied outdoor corridors and pathways supported by metal pipe columns
- Shape and massing of classroom buildings
- Original pipe railings in some locations
- Spatial relationships between buildings
- Automobile drop-off separate but linked
- Primary perimeter buildings turned inward
- Stuccoed exteriors
- Shed roof configurations
- Original entrances
- Original fenestration with grouped and varied window sizes
- Courtyards and green space
- Use of partial brick walls for anchor buildings and at campus exterior locations.

These features provide evidence that SOCES clearly embodies the characteristics of a postwar modern functionalist school campus, with a unified campus displaying a strong emphasis on design, scale, circulation, and function. The main campus core displays great care in planning with 1-story massing extended across the site, and an apparent emphasis on the purity of the design. The campus design has a strong design identity by relating the orthogonal, radiating, and curved circulation design elements with the linear, wedge-shaped classroom buildings that serve as the modular units of its finger-and-

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[6] Weeks, Kay D., and Anne E. Grimmer. 1995. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstruction of Historic Buildings*. Washington, DC: U.S. Department of the Interior, National Park Service.

[7] *California Code of Regulations,* Title 14, Chapter 3. CEQA Guidelines. Section 15064.5(b).

cluster hybrid plan design (Figure 1, *Central Axis of the SOCES Campus, Viewed from Entrance*; Figure 2, *View of Concrete Podium "Hub" of the Radiating Campus Core Plan, SOCES Campus*; Figure 3, *Canopied Concentric Arc Pathway of the Circulation Plan, SOCES Campus*). The indoor-outdoor intention is manifested by the school's many windows, clerestories, canopied walkways, and public spaces that create that sense of place.

Figure 1. Central Axis of the SOCES Campus, Viewed from Entrance
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 2. View of Concrete Podium "Hub" of the Radiating Campus Core Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 3. Canopied Concentric Arc Pathway of the Circulation Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

District Eligibility Standards

In addition to maintaining its original character-defining features, the District holds that to *retain* its eligibility for the CRHR against the context theme of Educating the Baby Boom: Postwar Expansion and the Modern Functionalist School Plant, 1945–1969, a historic resource *must maintain* the District's Integrity Considerations and the following eligibility criteria:

- Clearly embodies the characteristics of a postwar modern functionalist school campus
- Displays a unified, functional site design, with buildings extending across the site and oriented in relation to outdoor spaces (courtyards, patios, outdoor play areas)
- One-story massing for elementary schools; up to two stories for junior/high schools
- Classrooms, in detailing and plans, clearly express their function, with axial, fingerlike wings, plentiful fenestration, and connections to the outdoors
- Retains most of the associative and character-defining features from the period of significance[8]

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[8] Sourced from *Los Angeles Unified School Historic Resources Survey Report* by Sapphos Environmental, Inc., June 2014.

Overview of Integrity Considerations within the SOCES Campus

For the purposes of this review, the historic main campus core within the SOCES property is referred to as the "historic district." To better plan proposed projects, an overview of integrity considerations is presented here specific towards preserving the historic district within the SOCES.

In general, the historic district (orange buildings and accompanying landscape features and circulation design [Figure 4, *Existing Campus Plan*] should be maintained, as it is a functional historic 1950s campus plan. However, the primary historic core zone of both contributing classroom buildings and historic finger-and-cluster hybrid plans falls chiefly south of an area defined by the northernmost circulation east-west pathway, which is south of the Physical Education Building. Buildings north and northeast of the primary historic core zone defined by this pathway include: non-contributing portable buildings Nos. 30, 31, 33, 34, 35, and 36 shown in purple; contributing buildings 25, 26, and 27; and the Physical Education Building No. 24. These buildings *least* contribute to the historic campus core, therefore new construction is encouraged within the northern zone that includes them.

New construction is discouraged within the primary historic core zone for reasons discussed in the Analysis below, as substantial design review requiring Secretary of the Interior's Conformance would be required to insure that (1) enough historic fabric—and clarity of historic campus design intent could be retained; and (2) new construction could maintain the historic elements of rhythm, massing, scale, and color to be compatible with both the architecture and landscape circulation design plan of the historic district. Both would be required to insure preservation of the historic district's integrity.

Proposed Concept Project Description

A review of the potential impacts of the general concept plan known as "Concept 2" (hereafter referred to as just Concept 2) provides a practical example of the Integrity Considerations specific to the historic SOCES main campus core. To review Concept 2, this report will address two principal components: (1) The potential impact of the proposed demolition on the historic resource; and (2) the potential visual impact of the new construction. The analysis must be restricted within the limitations of the limited information provided, presented as "Concept 2" (Attachment 2, *Current Project Proposal Plan*).

Concept 2, as presently proposed, would include the following:

1. The demolition of the Physical Education Building and the demolition of four significant examples of the 1954 permanent classroom buildings in order to construct four larger new buildings of 2-story height. Two of these proposed new buildings—Science Building East and the new Elementary Classroom Building—would be 2-story classroom blocks that would run along the northern border between the athletic fields and the historic main campus core and its primary circulation and classroom area. These buildings would be sited at or near the general location of the current Physical Education Building.

2. The construction of a third proposed 2-story building—Science Building West—to be located within the north-central corner of the historic main campus core plan. Siting Science Building West within that plan would require the demolition of the four 1954 classroom buildings at that location known as Instrumental Music Building; Industrial Arts Building 2; Classroom Building B; and Classroom Building C.

3. The construction of a fourth proposed building of 2-story height that would serve as a

LEGEND SOCES Campus

㉕ Building Number

🟧 Permanent and Contributing

🟪 Portable and Non-contributing

•••• Historic District

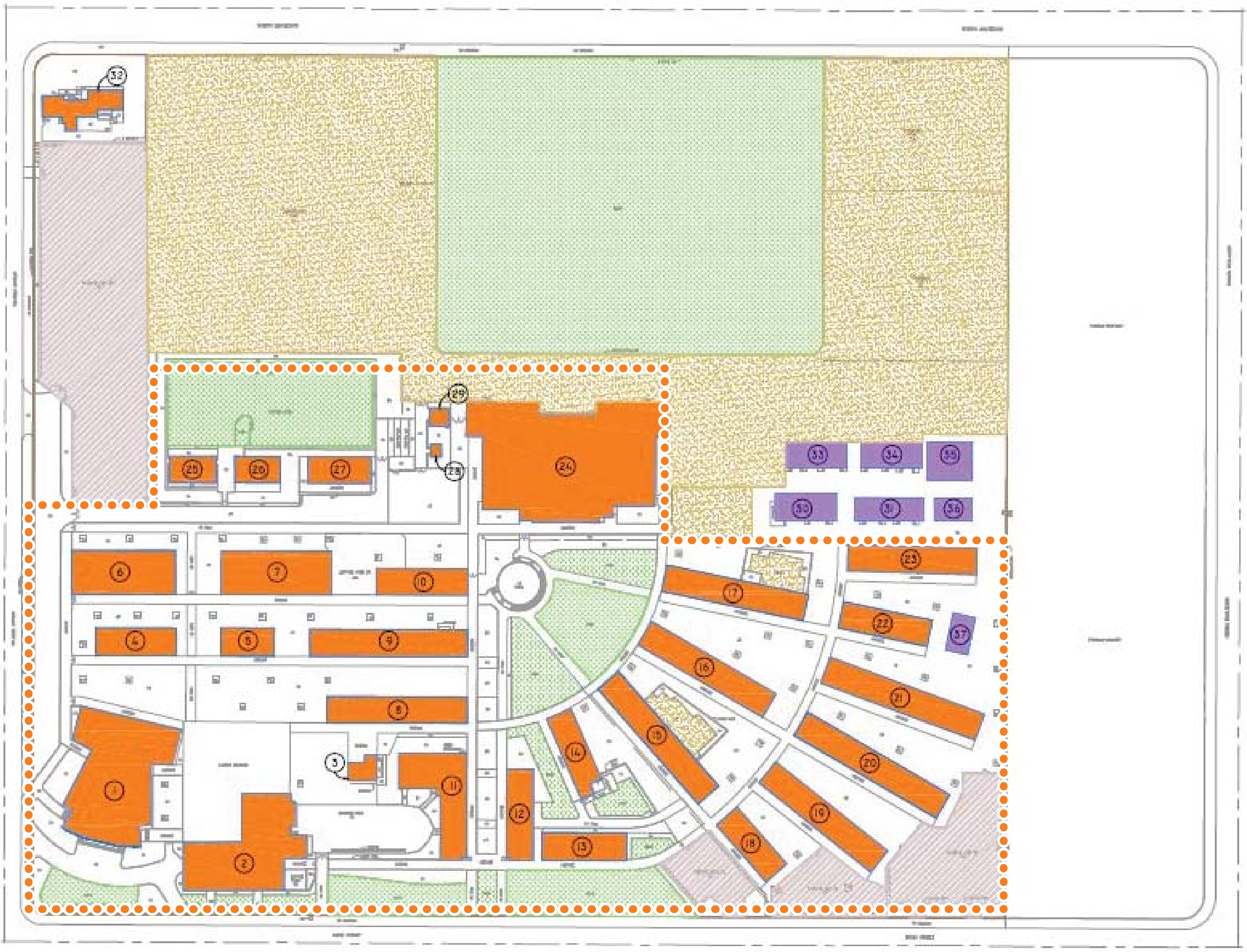

FIGURE 4
Existing Campus Plan

new gymnasium, to be located in the northwest quadrant of the campus at the site of a soccer field.

Concept 2 Project Impacts

Impact I. ***The demolition of the Physical Education Building and the demolition of four significant examples of the 1954 permanent classroom buildings in order to construct four larger new buildings of 2-story height. Two of these conceptualized new buildings—Science Building East and the new Elementary Classroom Building—would be 2-story classroom blocks that would run along the northern border between the athletic fields and the historic main campus core and its primary circulation and classroom area. These buildings would be sited at or near the general location of the current Physical Education Building*** **(Figure 5*, View of Physical Education Building across Radiating Courtyard, SOCES Campus*).**

The following character-defining features of the historic district may potentially be directly impacted by the *demolition* proposed by this element:

- Decentralized finger-and-cluster hybrid plan site design
- Rhythm of building placement and spatial relationship

The following character-defining features of the historic district will be directly impacted by the *new construction* proposed by this element:

- Low-massing (1-story)

Figure 5. View of Physical Education Building across Radiating Courtyard, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Analysis of Impact I

In the HRER, the Physical Education Building contribution to the historic district was described as marginal due to its design and minimal level of character-defining elements. The building was not found to be individually eligible for the CRHR for possessing distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values. Further, the evaluation stated:

> *"The barrel-vaulted Physical Education Building's placement along border between the northern athletics half of the campus and the southern classroom area makes it a visible if somewhat distant-feeling element within the campus. In the case of the Physical Education Building, the radiating plan seems to lead visitors away rather than encourage entry. When combined with the solid nature of the building's solid central core and dominant use of brick panels; and the canopied pathway running along the front that seems to be the only example to suggest a fence rather than a portal, the building seems less important than its scale would imply."*[9]

Although an anchor building in a significant location, the Physical Education Building was not a central repeating feature of *finger-and-cluster hybrid plan site design*, therefore its relationship to the circulation plan is not relevant to this potential impact. The Physical Education Building's form and detail do not make it a principal element of the historic main campus core, rather its massing, scale, and siting—aspects of *rhythm of building placement and spatial relationship*—create its relationship to all the other aspects of the historic main campus core. The proposed concept will provide new construction with a relatively similar massing, scale, and siting relationship to mitigate the loss of the building. Finally, the Physical Education Building was already not a contributing element of *low-massing,* so its 2-story height, and similar heights of future buildings in the location do not a substantial adverse change under Impact I.

Impact II. ***The construction of a third proposed 2-story building—Science Building West—to be located within the north-central corner of the historic main campus core plan. Siting Science Building West within that plan would require the demolition of the four 1954 classroom buildings at that location known as Instrumental Music Building; Industrial Arts Building 2; Classroom Building B; and Classroom Building C.***

The following character-defining features of the historic district may potentially be directly impacted by the *demolition* proposed by this element:

- Decentralized finger-and-cluster hybrid plan site design
- Asymmetrical plan with radiating paths and concentric arcs
- Rhythm of building placement and spatial relationships
- Indoor-outdoor connections and relationships
- Wide concrete pathways
- Canopied outdoor corridors and pathways supported by metal pipe columns
- Shape and massing of classroom buildings
- Spatial relationships between buildings
- Original entrances

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[9] Sapphos Environmental, Inc., 6 March 2017. *Historic Resource Evaluation Report for Sherman Oaks Center for Enriched Studies.*

- Original fenestration with grouped and varied window sizes
- Courtyards and green space

The following character-defining features of the historic district will be directly impacted by the *new construction* proposed by this element:

- Low-massing (1-story)

Analysis of Impact II

The location, scale, massing, and rhythm of the planned new Science Building West and its accompanying landscape elements is a significant potential intrusion into the historic campus finger-and-cluster hybrid plan circulation design. In the SOCES example, a central entry axis divides the plan into two halves and both sides rely on the central entry axis as the point of departure for students and staff. The western half of the plan encompasses three pathway fingers with associated classroom buildings that project west (Figure 6*, View of Concept 2 project location along Finger-Plan section of Historic Campus Core, SOCES Campus*). As proposed, Concept 2 will result in the partial loss of two fingers of the orthogonal portion of the plan along with their canopied walkways (Figure 7, *Area showing existing canopied pathway finger-plan elements and building spacing at Concept 2 project location, SOCES Campus*), there by posing an adverse impact on the *finger-and-cluster hybrid plan site design and* the *canopied outdoor corridors and pathways supported by metal pipe columns* of the western half of the main campus core.

Figure 6. View of Concept 2 project location along Finger-Plan section of Historic Campus Core, SOCES Campus

SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 7. Area showing existing canopied pathway finger-plan elements and building spacing at Concept 2 project location, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

The intended location of the new Science Building West would result in the loss of the four significant classroom buildings that are contributing resources to the SOCES historic district. All of the buildings presently in that location date to the original 1954 campus construction, and are atypical from almost all other classroom buildings, as they are larger and with reversed entrances than those of the typical classroom buildings (Figure 8, *View of one of atypical classrooms demolished in Concept 2: Instrumental Music Building, SOCES Campus;* Figure 9, *View of atypical classroom demolished in Concept 2: Industrial Art Building, SOCES Campus*). Their loss would represent an approximate 15–20 percent reduction of historic building fabric (exclusive of the Physical Education Building discussed above), which would increase to 20–25 percent with the loss of the covered walkways. Two classroom buildings to the west along the same existing circulation "fingers"—Industrial Arts Building 1 and the Choral Arts Building—would survive under proposed Concept 2, but they would survive as the "tips" of two amputated "fingers" from Impact II. Therefore Impact II imposes a substantial adverse change.

Figure 8. View of one of atypical classrooms demolished in Concept 2: Instrumental Music Building, SOCES Campus

SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 9. View of atypical classroom demolished in Concept 2: Industrial Art Building, SOCES Campus

SOURCE: *Sapphos Environmental, Inc., 2017*

Further, the new construction would create a loss of the *low-massing* of the immediate area, and attempt to create an additional outdoor courtyard and redefined circulation rhythm that would significantly impact the *rhythm of building placement and spatial relationships,* the *indoor-outdoor connections and relationships, and* the *wide concrete pathways*. There would be a loss of *original entrances, original fenestration with grouped and varied window sizes,* and *original courtyards*.

Impact III. *The construction of a fourth proposed building of 2-story height that would serve as a new gymnasium, to be located in the northwestern-most quadrant of the campus at the site of a soccer field.*

Analysis of Impact III

The HRER has established that the primary northern perimeter of the SOCES historic district includes the athletics area along with the Physical Education Building and adjacent original buildings, and that those buildings are less crucial to the historic district than those located to the south. Therefore the proposed new gymnasium location would impose minimal impact on the SOCES historic district.

Mitigation Measures

Measures to mitigate the three impacts of Concept 2 include: minimizing demolition and new construction to areas above the northernmost circulation walkway that runs just south of the Physical Education Building; preserving the finger-and-cluster hybrid plan circulation areas and related landscape and structure components; and designing new construction within the compatibility guidelines provided by the Secretary of Interior's *Standards for the Treatment of Historic Properties*;[10] Preservation Brief 14, New Exterior Additions to Historic Buildings;[11] and Preservation Brief 17, Architectural Character – Identifying the Visual Aspects of Historic Buildings as an Aid in Preserving their Character.[12]

Summary Analysis

As stated, the proposed concept project would require demolition of the Physical Education Building and four significant examples of the 1954 permanent classroom buildings in order to construct four new buildings that would all be larger than current campus buildings. The new construction as conceptualized would be largely incompatible with the existing classroom buildings, landscaping, and circulation design of the original main campus core, as proposed in Concept 2.

Recommendations

Overall, the integrity of the SOCES historic district could survive the loss of the Physical Education Building, provided the new construction is designed in a way that mitigates the cumulative and aesthetic aspects of their loss. It is believed that the strongest element of the SOCES historic district—the radiating plan, its hub, and the classroom buildings—can be maintained despite the loss of that building. But further loss caused by the demolition of contributing historic classroom buildings and

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[10] National Park Service, U.S. Department of the Interior. *The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings*. Available at: https://www.nps.gov/tPS/standards/four-treatments/standguide/index.htm

[11] National Park Service, U.S. Department of the Interior. *Preservation Briefs*. Available at: https://www.nps.gov/tps/how-to-preserve/briefs.htm

[12] *Ibid.*

finger-plan design elements that would be imposed by the insertion of new construction within the historic campus core would cause additional adverse change. As stated in the "Overview of Integrity Considerations within the SOCES Campus" section above, in order to insure preservation of the historic district's integrity, enough historic fabric and clarity of historic campus design intent needs to be retained; and new construction elements maintaining rhythm, massing, scale, and color would need to be compatible with both the architecture and landscape circulation design plan of the district. It seems clear that such could not be achieved under Concept 2 as currently proposed.

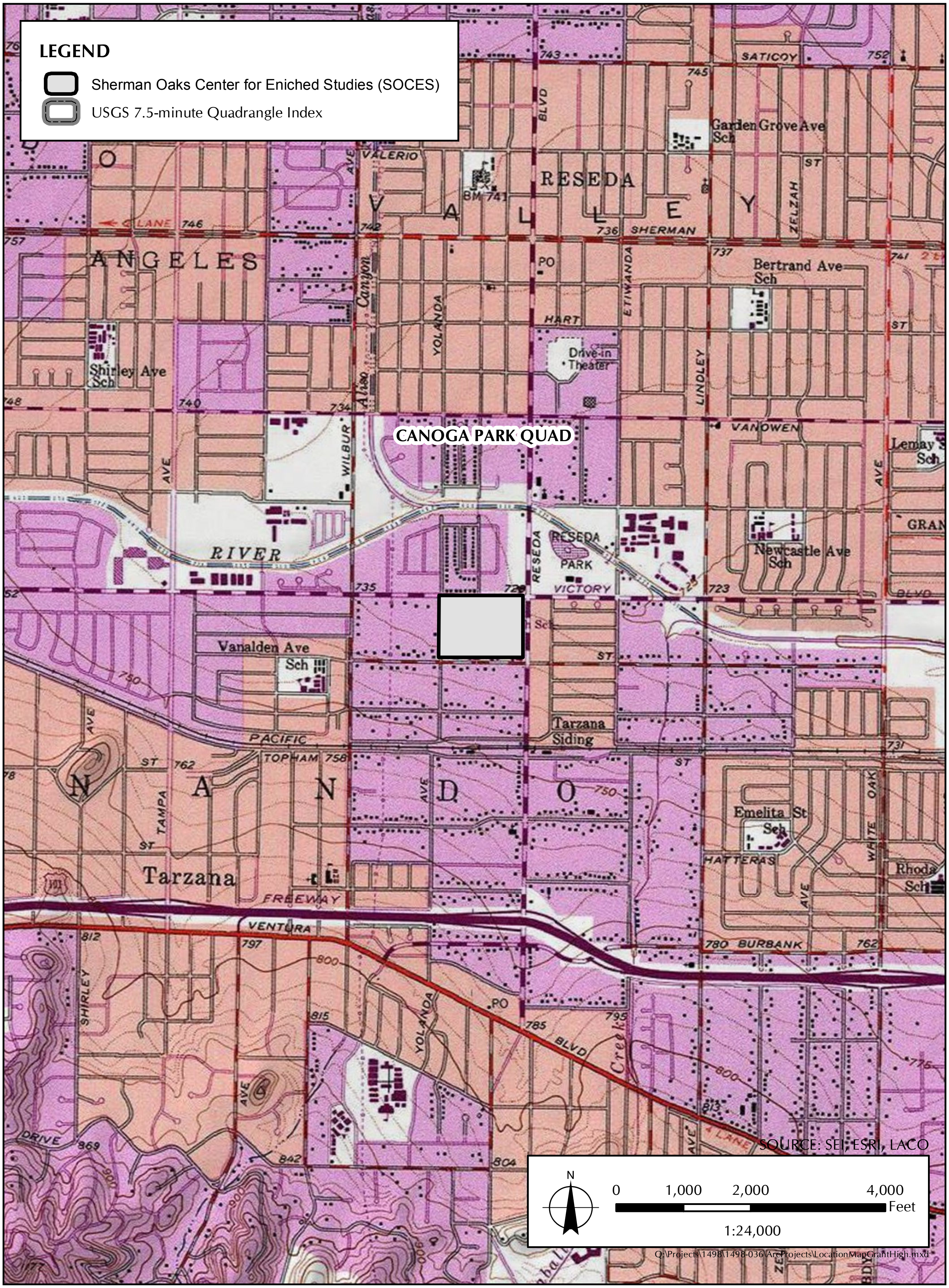
The District has stated that a historical architect will guide the project following the Secretary of the Interior's *Standards for the Treatment of Historic Properties*. This is a crucial step to insure that new construction is compatible within the historic campus.

CONCLUSION

Sapphos Environmental, Inc. finds that the proposed project concept known as Concept 2 would result in a substantial adverse change in the significance of the historical resource such that the significance of the historical resource would be materially impaired; but if appropriate measures are employed to minimize areas of new construction and ensure that the new construction is outside of the area of existing character-defining elements of the SOCES historic district, then the impact may be mitigated.

Should there be any questions regarding the information contained in this MFR, please contact Mr. Donald Faxon at (626) 683-3547.

ATTACHMENT 1
PROJECT LOCATION MAP



SOURCE: SEI, ESRI, LACO

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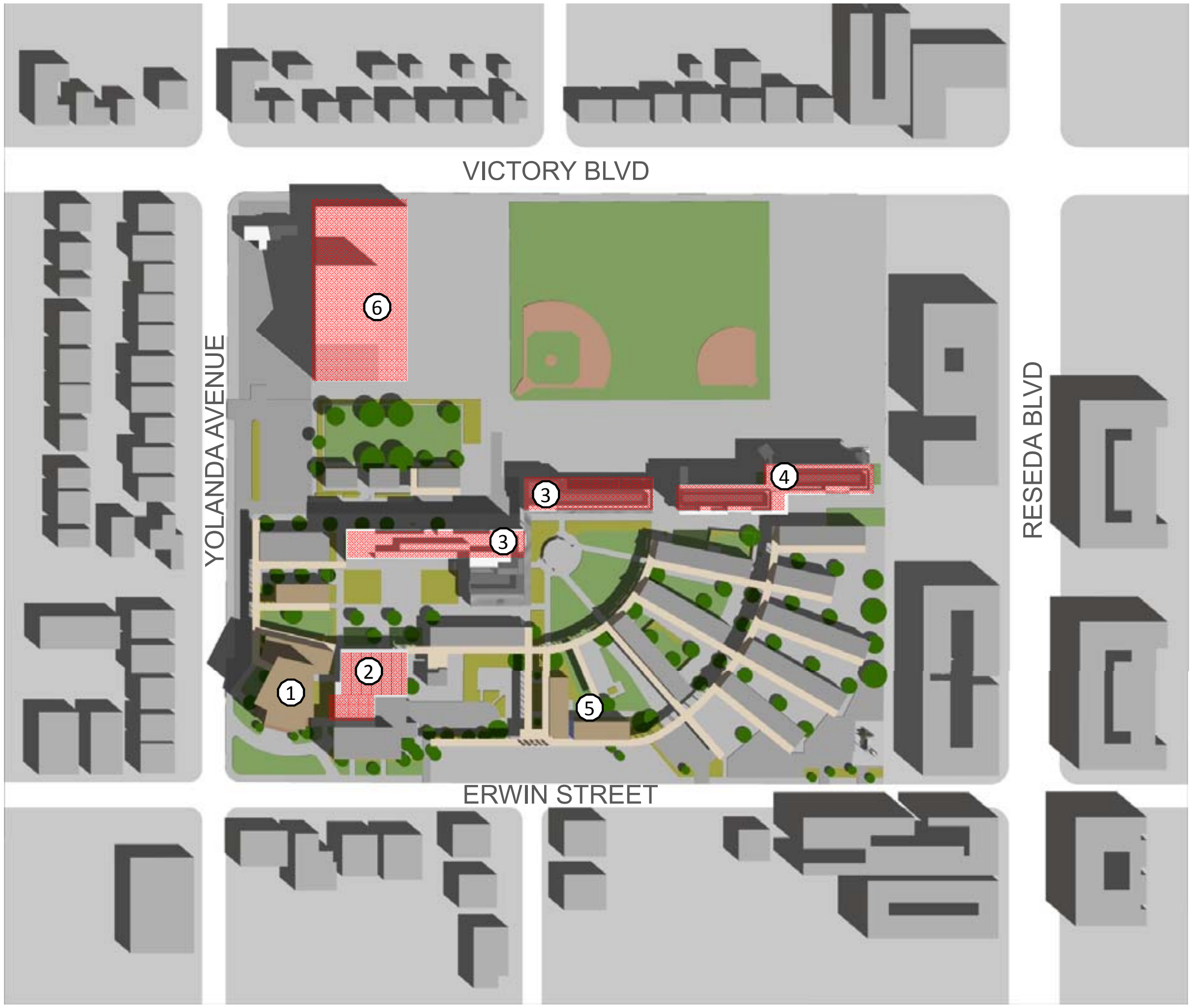
ATTACHMENT 2
CURRENT PROJECT PROPOSAL PLAN

PLANNING CONCEPT 2

High Spine



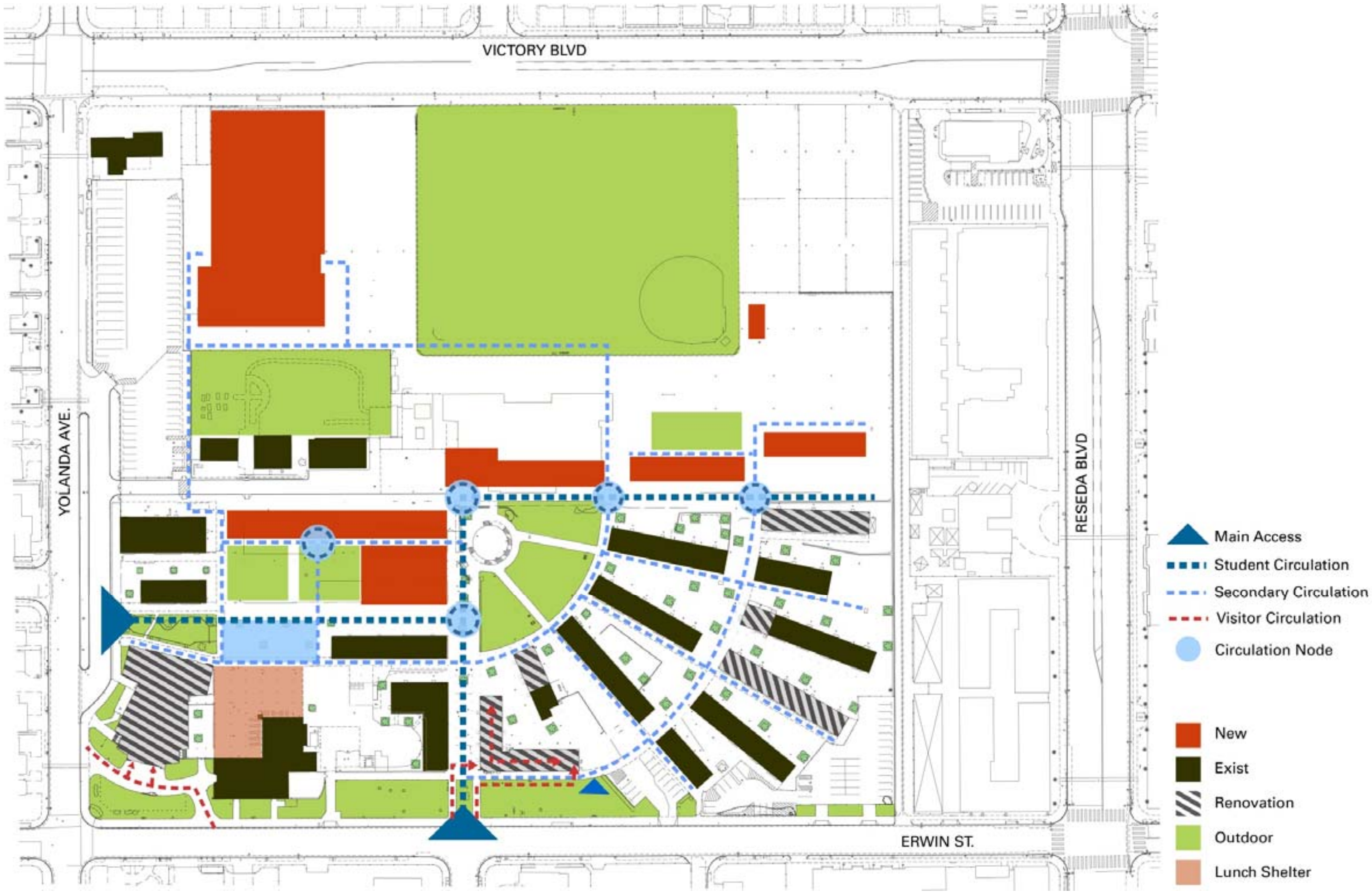
1. Auditorium
2. Lunch Shelter
3. Science, Art & Technology Building
4. Elementary Classroom Building
5. Administration Building
6. Gymnasium

Site Plan – Planning Concept 2

HED

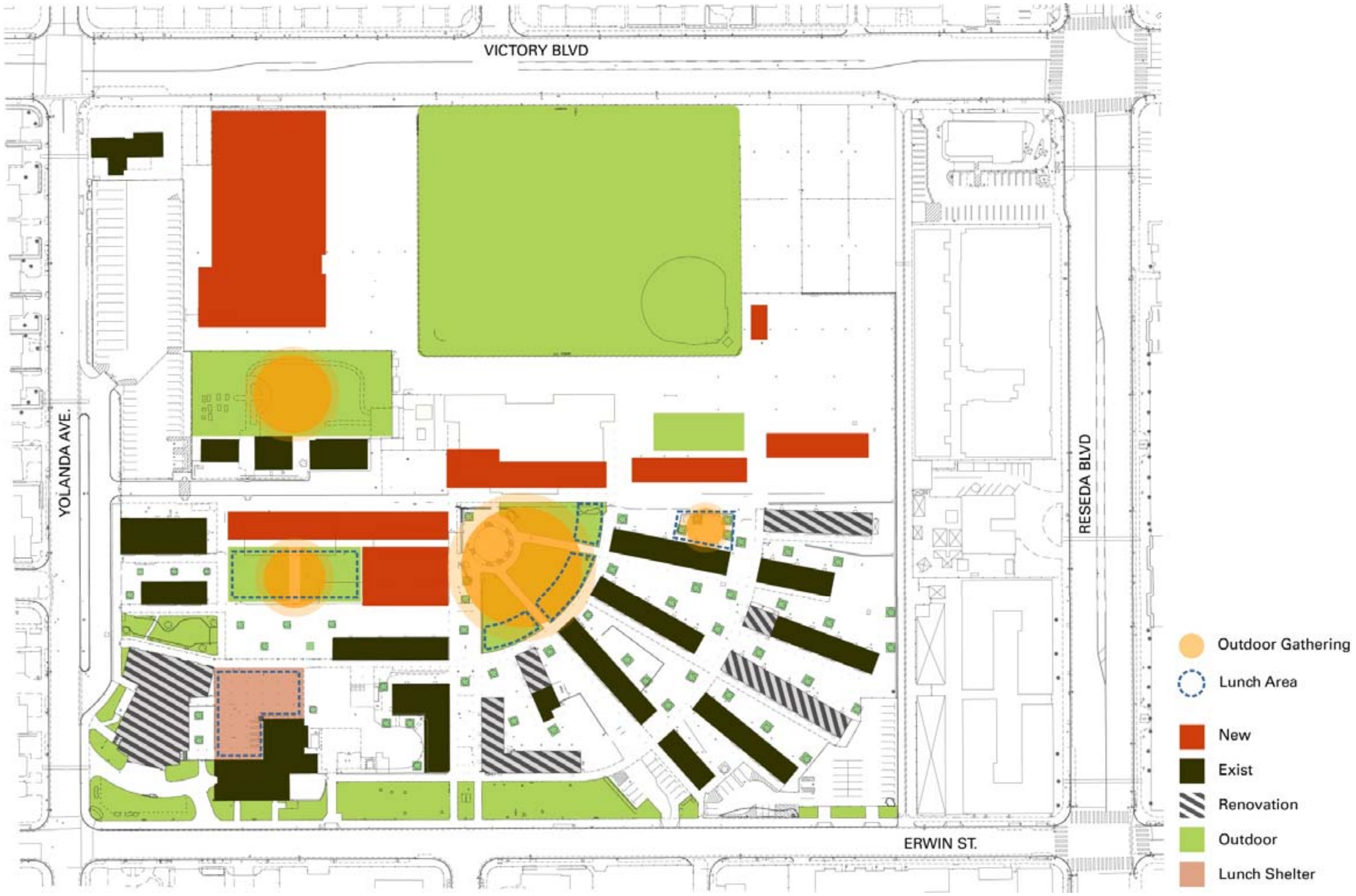
Site Plan - Planning Concept 2
Vehicular Circulation Diagram

HED



Site Plan - Planning Concept 2
Pedestrian Circulation Diagram

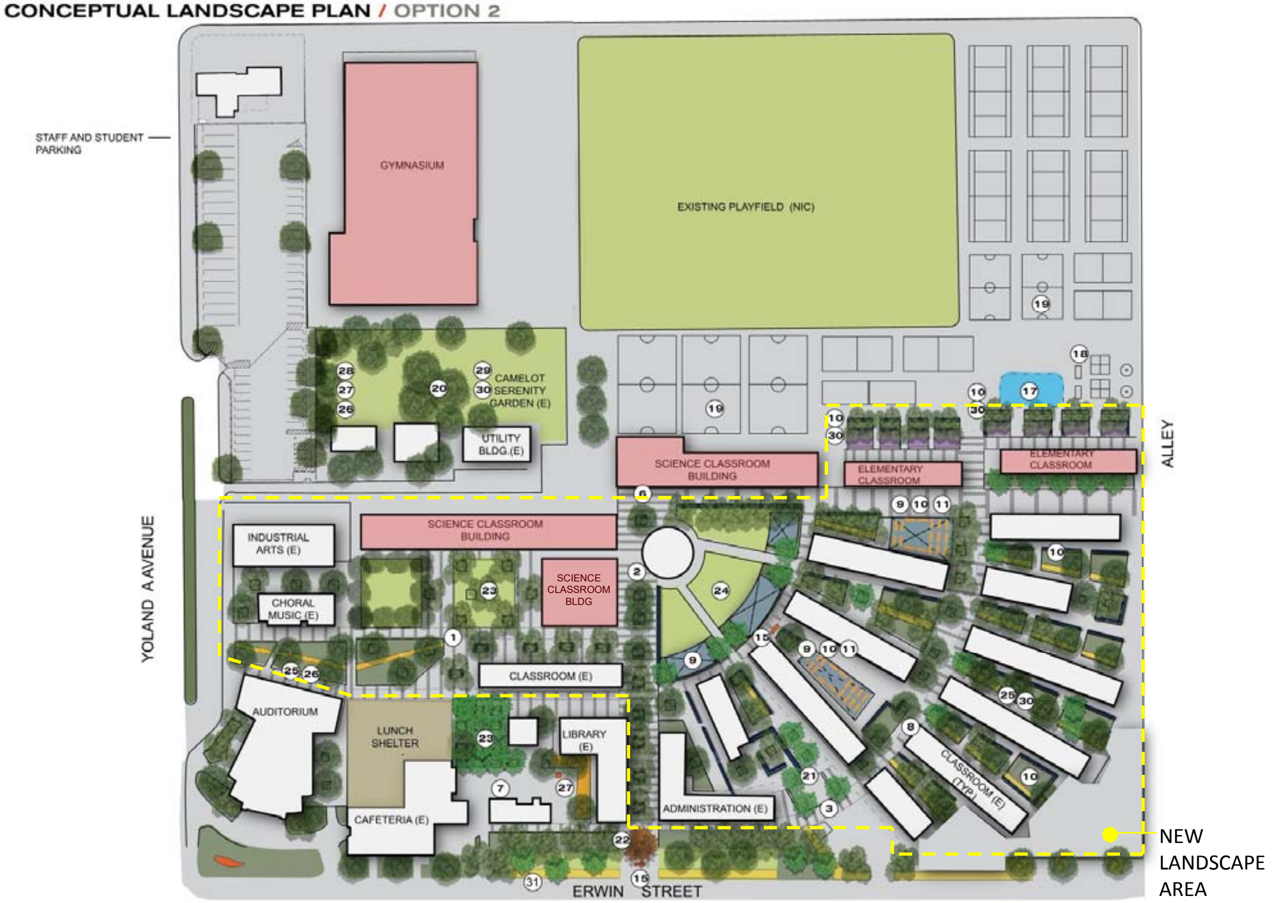
HED



Site Plan - Planning Concept 2
Lunch Area and Activity Zone Diagram

HED

CONCEPTUAL LANDSCAPE PLAN / OPTION 2



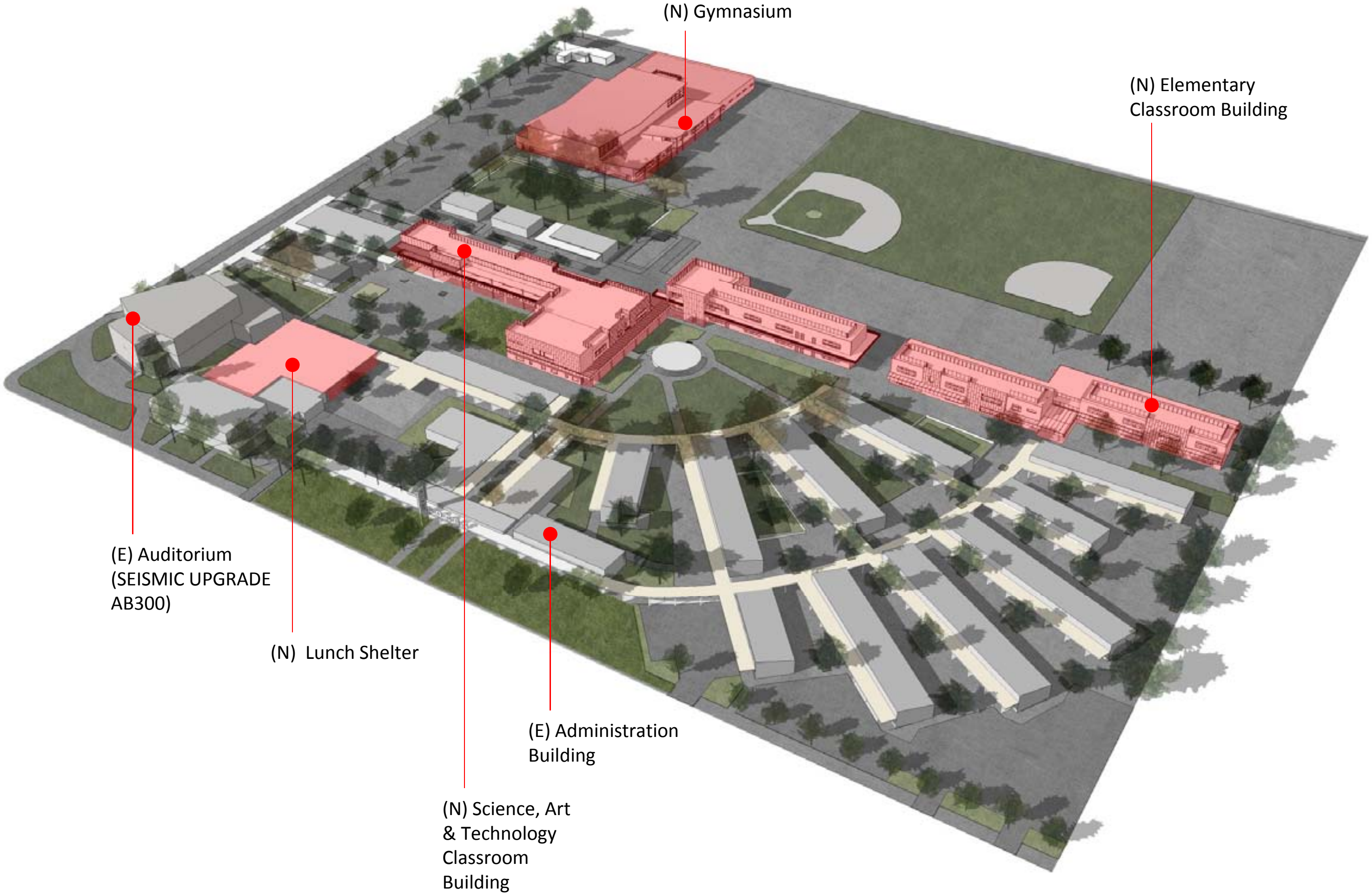
① ENTRANCE PROMENADE
② PROCESSIONAL ENTRY
③ CAMPUS WALK
④ CAMPUS CENTER PLAZA
⑤ INTEGRAL COLORED CONCRETE WITH ACID-ETCH FINISH
⑥ PERMEABLE PAVERS
⑦ ASPHALTIC CONCRETE PAVEMENT (TYP.)
⑧ EXISTING COVERED WALKWAY
⑨ PROPOSED CLOTH SHADE STRUCTURE
⑩ BREAKOUT SPACE/OUTDOOR LEARNING AREA
⑪ OUTDOOR SEATING (TYP.)
⑫ PERFORMANCE PLAZA
⑬ TURF STAGE
⑭ STUDY COURT
⑮ EDUCATIONAL KIOSK
⑯ PUBLIC ENTRY ART
⑰ ELEMENTARY PLAY STRUCTURE
⑱ PAINTED GAMES
⑲ PAINTED SPORTS COURTS (TYP.)
⑳ EXISTING TREE (TYP.)
㉑ PROPOSED SHADE TREE
㉒ PROPOSED ORNAMENTAL TREE
㉓ TREE BOSQUE
㉔ TURF
㉕ BIOSWALE GARDEN (CO-ORDINATED WITH CIVIL ENGINEER)
㉖ FRAGRANCE GARDEN
㉗ EDIBLE GARDEN
㉘ POLLINATOR GARDEN
㉙ CULINARY GARDEN
㉚ IPM/HABITAT GARDEN
㉛ NATIVE PLANT GARDEN

SHERMAN OAKS CENTER FOR ENRICHED STUDIES TARZANA, CALIFORNIA
2016-09-08

AHBE

Conceptual Landscape Site Plan – Planning Concept 2

HED



Aerial View Draft – Planning Concept 2

Central Plaza – Planning Concept 2

HED

Elementary Building – Planning Concept 2

HED

Science, Art & Technology Building – Planning Concept 2

ATTACHMENT 3
RESUMES OF PROJECT PERSONNEL

Sapphos
environmental inc

Donald M. Faxon, M.A.

Architectural Historian
Preservation Specialist

Master of Arts (Historic Preservation), Savannah College of Art & Design, Savannah, Georgia 2014

Bachelor of Science (Public Communications), Boston University, Boston University, 1986

- *Cultural resources management and legal compliance*
- *History of California*
- *Identification and evaluation of the built environment*
- *Archival documentation*
- *Historic preservation consultation*
- *Historic treatment planning, monitoring, and management.*
- *Historic Structure reports and conditions assessment*
- *Scientific materials evaluation*

Years of Experience: 25

- *Society of Architectural Historians*
- *Former Cultural Heritage Commissioner, City of Sierra Madre*
- *Sigma Pi Kappa Historic Preservation Fellowship*
- *Architectural History*
- *Cultural History*

Donald M. Faxon has professional experience as both an Architectural Historian and Architectural Preservation Specialist. He served as Senior Historical Architect at a state office of historic preservation (SHPO) and as a city Cultural Heritage Commissioner; and has worked for the National Park Service and the National Trust for Historic Preservation. He has explained, interpreted, applied, and/or enforced the Secretary of the Interior's Standards in positions on both Coasts. His experience includes providing inventory, significance evaluations, re-use studies, and interpretation options; and architectural technical expertise in design review, visual and scientific condition assessments, preservation and conservation treatments, historic structure reports, project monitoring, compatible integration design for code required elements, and accessibility planning for the disabled. Additional skills include architectural project planning and monitoring. He has prepared technical reports for historical built environment resources to satisfy compliance requirements under CEQA, Section 106, and local ordinances.

Mr. Faxon has more than 25 years of experience as a historic preservation professional on projects involving a wide variety of building, structure and landscape styles and types, including agricultural, maritime, industrial, residential, commercial, transportation, civic, religious, entertainment, and military related resources.

Mr. Faxon's selected project experience includes:

- County and California State register evaluation for the Franklin Ranch Road Bridge in Goleta, Santa Barbara County
- CEQA evaluation of historical significance and design review of the proposed rehabilitation of 71 Palomar Street; San Luis Obispo, CA
- National Register and State Register evaluations of Los Angeles County Parks; Los Angeles, CA
- A context study of automotive-related architecture and Route 66 history of Old Town Pasadena, Pasadena, CA
- The administration and monitoring of Congressionally-funded seismic disaster grant projects at Castle Green Apartments, Pasadena; Shrine Auditorium, 665 Western Boulevard, Los Angeles; and Case Study House Number 18, 199 Chautauqua Blvd, Pacific Palisades, California
- Historic resources inventory and evaluation for Union Oil Avila Point Refinery, San Luis Obispo CA
- Field evaluations and recommendations for endangered properties at Rocky Mountain National Park, CO
- Evaluation of properties owned by the Preservation Society of Newport County (The Newport Mansions) for Americans with the Disabilities Act compliance; Newport, RI
- Evaluation of "Old State House" buildings and other properties owned by the State Government of Rhode Island for repair, restoration, and Americans with the Disabilities Act compliance, Providence, RI
- Planning of restoration options for the Governor Stephen Hopkins House followed by implementation of treatment recommendations, specifications, and project management; Providence, RI

Appendix C-2.

2017 Historic Resource Evaluation Report

Sapphos
environmental inc.

March 6, 2017
Job Number: 1498-036
Sherman Oaks Center for Enriched Studies

HISTORIC RESOURCE EVALUATION REPORT

TO: Los Angeles Unified School District
(Ms. Debi Howell-Ardila)

FROM: Sapphos Environmental, Inc.
(Mr. Donald M. Faxon)

SUBJECT: Historic Resource Evaluation Report for Sherman Oaks Center for Enriched Studies, 18605 Erwin Street, Tarzana, California 91355

ATTACHMENTS:
1. Project Location Map
2. Sherman Oaks Center for Enriched Studies Site Plan
3. Resumes of Project Personnel

EXECUTIVE SUMMARY

This Memorandum for the Record documents the results of the Historic Resource Evaluation Report undertaken for Sherman Oaks Center for Enriched Studies (SOCES) site plan for the property located at 18605 Erwin Street, in the Tarzana neighborhood of the City of Los Angeles. The property, originally constructed between 1953 and 1955 as South Reseda Junior High School, is owned and administered by the Los Angeles Unified School District (District). This Historic Resource Evaluation Report was prepared by Mr. Donald Faxon who meets the Secretary of the Interior's *Professional Qualification Standards* in the field of Architectural History. The 21.53-acre campus comprises approximately 37 buildings and structures, 30 of which are considered permanent and contain 53 classrooms. The north half of the site contains playing fields, playing courts, and landscaping features. All buildings are single story, although heights vary with anchor buildings and a few atypical classroom buildings. The review was based on a site investigation of the property; literature review and online research; and an application of federal, State, and local register eligibility criteria. As a result of the investigation, the SOCES campus property was determined to be eligible for listing in the California Register of Historical Resources pursuant to Criterion 1. The campus was determined eligible based on the integrity of the historic material as exemplification of an intact, low-massed, post-war, indoor-outdoor, finger-and-cluster hybrid plan school consistent with the criteria established in the District Historic Context Statement. The campus exemplifies District design ideals and principles of the era. Therefore, the property is an historical resource for the purposes of Section 15064.5(a) of the California Environmental Quality Act Guidelines. No individual buildings were determined eligible during this evaluation.

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INTRODUCTION

In January 2017, the Los Angeles Unified School District (District) contracted Sapphos Environmental, Inc. to conduct a Historical Resource Evaluation report (HRER) in support of the Sherman Oaks Center for Enriched Studies (SOCES, historically known as "South Reseda Junior High School"). Opposing opinions have been provided as to whether the campus is eligible for the California Register of Historic Resources (CRHR) as a historic district. An evaluation by PCR Services Corporation in June of 2015 found the campus not eligible;[1] a less intense assessment by SurveyLA in July of 2015 suggested it was potentially eligible.[2] The purpose of this evaluation is therefore to provide an independent and exhaustive evaluation of SOCES regarding eligibility for listing in the CRHR. Buildings and structures that are individually eligible, or collectively eligible as a district, must be treated as historical resources pursuant to Section 15064.5(a) of the California Environmental Quality Act (CEQA) Guidelines.

This HRER has been prepared to assist the District in their planning, operation, and maintenance of SOCES, and will be filed with the South Central Coastal Information Center (SCCIC), once reviewed and approved by the District.

The review is based on a site investigation of the property; literature review and online research; and an application of federal, state, and local register eligibility criteria. The two prior evaluations of the property were thoroughly reviewed and the factual data in the respective evaluations consider in this HRER. The campus was not surveyed in the Programmatic EIR associated with the 2014 District Historic Context Statement.

PROPERTY LOCATION AND DESCRIPTION

SOCES is located at 18605 Erwin Street, in the Tarzana neighborhood of the City of Los Angeles, in the County of Los Angeles, California (Attachment 1, *Project Location Map*). Lying approximately 14.75 miles northeast of Los Angeles City Hall, SOCES is sited on Tract No. 13670, Lots 7 to 26, roughly bounded by Victory Boulevard to the north, Reseda Boulevard to the east, Erwin Street to the south, and Yolanda Avenue to the west. The campus comprises approximately 37 buildings and structures, 30 of which are considered permanent, along with playing fields, playing courts, and landscaping features (Table 1, *Permanent Buildings within SOCES Campus Core*; Attachment 2, *Sherman Oaks Center for Enriched Studies Site Plan*).

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[1] PCR. 19 June 2015. *Memorandum of Preliminary Historic Evaluation Report (HRER) for Sherman Oaks Center for Enriched Studies.*

[2] Survey LA. 2012. *Reseda – West Van Nuys Community Plan Area.*

TABLE 1
PERMANENT BUILDINGS WITHIN SOCES CAMPUS CORE

Plan No.	Building Name	Year	Square Footage
1	Auditorium Building	1954	13,977
2	Cafeteria Building	1954	9,586
3	Student Store Building	1954	702
4	Choral Music Building	1954	2,520
5	Instrumental Music Building	1954	1,680
6	Industrial Arts Building 1	1954	6,229
7	Industrial Arts Building 2	1954	5,336
8	Classroom Building A	1954	4,144
9	Classroom Building B	1954	4,648
10	Classroom Building C	1954	2,688
11	Library Building	1954	4,887
12	Counseling Building	1954	2,665
13	Administration Building	1954	2,464
14	Sanitary Building D	1954	2,434
15	Arts & Crafts Building	1954	4,480
16	Classroom Building F	1954	4,256
17	Homemaking Building G	1954	4,256
18	Classroom Building H	1954	2,240
19	Classroom Building J	1954	4,256
20	Classroom Building K	1954	4,928
21	Classroom Building L	1954	4,928
22	Classroom Building M	1954	2,688
23	Classroom Building N	1956*	3,864
24	Physical Education Building	1953	22,358
25	Lath House	1954	1,344
26	Agricultural Classroom Building	1954	1,344
27	Utility Building	1954	1,848
28	Gardner's Tool Shed	1954	140
29	Storage Unit	1954	360
32	Guidance Center Building	1950	2,182

* Rebuilt after construction fire

METHODOLOGY

Sapphos Environmental, Inc. (Mr. Don Faxon) completed a site visit of SOCES to determine if the campus was eligible as a historic district for the CRHR. Mr. Faxon meets the Secretary of the Interior's *Professional Qualification Standards* for Architectural History (Attachment 3, *Resumes of Project Personnel*). On February 2, 2017, Sapphos Environmental, Inc. inspected SOCES to evaluate its campus, and document its landscape and buildings. A digital photographic record of the resources at the school was compiled. Previous evaluations were analyzed and research was performed to verify those reports. In addition, at the request of the District, Mr. Faxon provided an initial opinion by teleconference on February 3, 2017, as to the eligibility of the campus for the CRHR.

HISTORIC OVERVIEW

Post-war Indoor-Outdoor Integration

The idea that children "…should be nourished like plants in a garden" prompted educators who were interested in improving early development of children, to promote the idea of exposing young students to the outdoors for health and learning as early as the mid-19th century, mostly in regard to kindergartens. Urban problems versus the beneficial effects of outdoor play were discussed regarding infant education before the 20th century, but outdoor exposure was initially avoided. It was not until Friedrich Froebel developed the first kindergarten in Germany in 1837 that an architectural approach was attempted.

The concept of integrating indoor and outdoor exposure at public schools increased during the 20th century, resulting in classroom buildings designed with better natural light and access to the outdoors. Post-war American schools continued developing practical applications of the idea, especially in California. Canopied outdoor corridors supported by steel post and beam; cross-lighting using larger windows employed on northern elevations balanced by bands of clerestory windows on south elevations; and modular site planning and design were all incorporated in school designs as part of the same modern themes promoted in periodicals such as *Architectural Forum* that encouraged architects to start designing residential architecture to take advantage of the state's warm climate.[3]

Finger-, Cluster-, and Hybrid-Plans: Development and Influence

The District has organized the historic context for building and structure typologies into multiple themes and eras.[4] As a hybrid plan, SOCES is associated with all three post-war plan type contexts: Finger-, Cluster-, and Hybrid-plans.

> "Two major decentralized, school plan typologies were developed in the 1940s and 1950s, with California as their testing ground: the finger-plan and cluster-plan. The plan type that best captured the design principals of the immediate post-war period was the finger plan school, although its roots date to 1930s prototypes. Constructed in Lafayette, California, east of San Francisco, Franklin & Kump's rational "finger-plan" school perfectly captured modern concepts of the post-war period, including the indoor-outdoor integration, and became the most common school plan typology in the United States in the 1940s. Constructed around 1940, Acalanes Union High School was designed for a large rural site, with one-story wings extending outward in finger-like wings. Classrooms consist of open lofts with adjustable plywood partitions dividing the interiors. The pavilion-like site plan, low-scale, and finger-like classrooms provide ample opportunities for outdoor access. Interior hallways were moved outside, with sheltered outdoor corridors throughout the campus. The finger-like plan allowed for cross-lighting and ventilation for each classroom. To the north, students enjoyed outdoor views through full-length windows. To the south, bands of high clerestory lights provided balanced illumination without glare.
>
> Modular design and construction allowed for easy expansion of the school as enrollment increased. The campus included a variety of facilities, including gymnasium and playing fields, workshops, dining room, a network of classroom wings, and a parking area, all configured in a

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[3] Sourced from Los Angeles Unified School District Historic Context Statement, 1850 to 1969 by Sapphos Environmental, Inc., March 2014.

[4] *Ibid.*

unified site plan. In keeping with 1930s planning trends, pedestrians and automobiles were separated through the use of a 500-foot-long canopied passageway, [connecting] the street and drop-off areas with the school entrance.

It was in the post-war era that Franklin & Kump's school typology and plan took off. While the California roots of the design were emphasized, the concept was adapted for other regions of the country, and was soon joined by the also-influential Richard Neutra's Kester Avenue Elementary School in Sherman Oaks and Robert Evans Alexander's Baldwin Hills Elementary School in Los Angeles.

By the early 1950s, the popularity of the finger-plan school had begun to decline. First, the design required large swaths of land to accommodate the extended site plan. Second, the plan increased cross-campus walk times and communication. In some scenarios, it also made more sense to build upward instead of outward. On hillside locations, where an expanded footprint meant doubling or tripling already expensive grading costs, the finger-plan school was not a viable option. In mass circulation and trade magazines of the day, though, the one-story scale was still preferred, in particular for elementary schools (the exception remained densely developed urban sites, where one could only expand upward).

The need for cost-effective school design and construction was an additional factor in the move away from the finger-plan. By the early 1950s, there were signs that the immediate post-war focus on carefully harnessing and controlling light—including orienting the building on a north-south axis to create the perfect blend of cross-lighting—was becoming too time consuming. Not all sites would be large enough, and not all building programs well-funded enough, to justify having such an expenditure of design time devoted to fenestration alone. In 1952, *Architectural Record* observed that, in national school design, in more and more localities that substantially less emphasis on daylighting may be anticipated. Natural light is so variable that it can seldom be relied on during the entire school day without considerable recourse to electric light. Control of daylight to prevent glare has been found costly and involved.

With high demand and restricted funding for new schools a constant issue, the possibility of a more compact campus plan became the subject of study, a few early prototypes, then a new trend, the cluster-plan school, by the early 1950s. The cluster-plan school offered a logical solution to these issues. It retained the low massing and indoor-outdoor access and views for all classrooms. But rather than extending wings along an axis, the plan called for grouping them as modular, standalone units around a shared central courtyard. Classrooms still had generous expanses of windows, but now views took in the courtyard and other classrooms, which provided a more communal, neighborhood-like setting.

As with the finger-plan, the new typology was interpreted and designed in many different variations, but the basic ideas remained the same. Even in California, with space to grow, the cluster-plan became the preferred typology in the 1950s. Finger-plan schools were still built—usually the condensed or modified typologies already emerging by the late 1940s. But in a five-year study of the state's school plants, the California Department of Education praised the cluster-plan for more efficient land utilization. The advantages of this plan were many: more child-friendly in its scale and setting, especially for younger children; more communal, with more shared spaces; and easier to supervise. With this plan, what had been the corner of the room on the interior became the front row on the courtyard.

> One early example in California was John Lyon Reid's 1951 John Muir Elementary School in Martinez, California, northeast of San Francisco. In his design, Reid employed a typical pavilion-like plan, with long one-story classrooms separated by patios and landscaping, accessed via sheltered walkways with wide eaves. The classroom wings are clustered around cross-wings, creating a courtyard setting. As with the Saarinens' Crow Island school, Reid's L-shaped classrooms created enclosed outdoor areas for outdoor play and recreation.
>
> Within the Los Angeles City School District, Sumner Spaulding and John Rex's Orville Wright Middle School (originally Westchester High School) was another early example of a finger-plan and cluster-plan hybrid, this time for a high school campus. The school incorporated the best of mid-century modern design, by one of the region's renowned firms, with the newest design principles for school plants. Completed in stages between 1948 and 1952, Orville Wright Middle School was constructed for a growing residential community near one of Los Angeles's centers for the aerospace industry.
>
> In a spare, modernist design, Spaulding & Rex incorporated the same modular design, low massing, and easy indoor-outdoor connections typical of the era (and mid-century modernism in Southern California). Cross-lighting was provided through bands of clerestories and single-pane fixed and casement windows. A network of canopied corridors linked buildings and facilities throughout the campus. In a nod to the aerospace industry employing much of the adjacent community, the campus cafeteria featured a circular, space-age design. The campus overall displays a decentralized but unified plan, zoned for automobile and pedestrian-only areas, with pavilion-like classrooms wings "clustered" around courtyards. Another District example of a hybrid finger and cluster-plan school is the George K. Porter Middle High in Granada Hills. Built in 1959 and designed by Rowland H. Crawford, the campus displays a pavilion-like plan, with axial classroom wings connected by a central corridor. Swaths of landscaped patios divide the classrooms. Interrupting the axis, the focal point of the campus is a landscaped quad, with an expansive lawn ringed by trees creating a neighborhood, park-like setting.
>
> The George K. Porter Junior High also reflects how Los Angeles's still-expanding suburbs provided a testing ground for modern design and programming ideas school plants. These buildings and so many others like them reflect how the suburbs continued to expand, especially throughout the San Fernando Valley, and how by the late 1950s mid-century modernism enjoyed wide acceptance among the public."[5]

Educating the Baby Boom: The Postwar Modern Functionalist School Plant, 1945–1969

SOCES, originally constructed as South Reseda Junior High School, was constructed in 1954, during a period theme characterized by the District as "Educating the Baby Boom: The Postwar Modern Functionalist School Plant, 1945–1969.

> "By the 1950s, many of the design ideas considered experimental in the 1930s had matured and become the national standard for schools. Stylistically, schools might include some historicist detailing reflecting popular styles (such as Colonial Revival). But, overall, a unified campus design, building types and plans that accommodated a high degree of indoor-outdoor integration, ample outdoor spaces, and sheltered corridors marked the typology as the mature

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[5] Sourced from Los Angeles Unified School District Historic Context Statement, 1850 to 1969 by Sapphos Environmental, Inc., March 2014.

version of the functionalist school plant. The priority remained the creation of a domestic scale for schools. Campuses displayed a one-story massing for elementary schools, and up to two stories for middle and high schools. Site plans, which often featured a decentralized, pavilion-like layout, lacked the formality and monumentality that characterized earlier eras of school design.

School types expressive of these ideals include the finger-plan (1940s–1950s) and cluster-plan (1950s), and variations on their basic themes. Combinations of these basic forms, which flexed according to available lot size and school enrollment, are also evident.

For LAUSD, the post-war years brought another round of reform as well as unprecedented expansion. Given the post-war classroom shortage, many campuses were constructed quickly, from standardized plans used districtwide, in designs that convey some of these ideas. The most intact and well-designed campuses among these, though, uniquely represent this era of reform and the midcentury modern school."[6]

SHERMAN OAKS CENTER FOR ENRICHED STUDIES (SOCES)

History

South Reseda Junior High School, now referred to as SOCES, was designed by the architectural firm of Parkinson, Powelson, Briney, Bernard, and Woodford in 1953 and, according to District documents, the first building to be built was the Physical Education Building during that year.[7] The main campus core was completed between 1954 and 1955 at a cost of $4,000,000. The 27-building campus was designed to support up to 1,600 students. According to previous studies, the school's name was changed in 1956 to Sequoia Junior High School.[8]

In 1980, SOCES was moved to the campus of the Sequoia Junior High School by order of a court judge. Sequoia Junior High School was ordered to close and its students sent to other schools. The campus thereafter became chiefly for magnets schools.

Parkinson, Powelson, Briney, Bernard, and Woodford

Parkinson, Powelson, Briney, Bernard, and Woodford were a team of Los Angeles architects who designed the SOCES campus. The firm succeeded the office of Donald B. Parkinson (son of Los Angeles area architect John Parkinson with whom he partnered to design Bullock's Wilshire) in 1945. The younger Parkinson had passed away but the new firm retained his name. Parkinson, Powelson, Briney, Bernard, and Woodford's most significant creation appears to have been the well-known 1947 General Motors Van Nuys vehicle assembly plant (now demolished), a facility that—along with GM's Fremont plant and Ford's famous Albert Kahn designed 1930 Richmond plant in the Bay area—provided significant "Big Three" vehicle production capabilities on the west coast. Other projects the firm is known for include at least two buildings for AT&T around the same time that the SOCES campus was built, one of which survives in altered condition in Riverside.[9] While an intensive search

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[6] Sourced from *Los Angeles Unified School District Historic Context Statement, 1850 to 1969* by Sapphos Environmental, Inc., March 2014.

[7] LAUSD February 2011. *SOCES Magnet: Pre-Planning Survey*, by Johnson Fein, Architect.

[8] PCR. 19 June, 2015 *Memorandum of Preliminary Historic Evaluation Report (HRER) for Sherman Oaks Center for Enriched Studies.*

[9] City of Riverside September 2012. *Citywide Modernism Intensive Survey*, by Historic Resources Group.

of District files was not possible, there was no evidence located at this time that Parkinson, Powelson, Briney, Bernard, and Woodford designed any other District campuses.

Neighborhood

HISTORIC RESOURCES ASSESSMENT

Architectural Description

Located on a 37 acres site in the western San Fernando Valley, the SOCES campus was designed and constructed between 1953 and 1955. The design is defined by a hybrid cluster- and finger-plan circulation design. The SOCES example provides a south-north central entry axis that divides the plan into two halves; both sides, east and west, rely on the central entry axis as the point of departure for students and staff (*Figure 1. View of Entrance Patio and Central Axis, SOCES Campus)*. The eastern side consists of both covered (canopied) and uncovered concrete pathway "spokes" leading to individual classroom buildings that radiate southeast across a large greenscaped open courtyard from a central concrete stage "hub*" (Figure 2. View of Concrete Podium, "Hub" of Radiating Campus Core Plan, SOCES Campus)*; it employs concentric curves (sometimes referred to as "arcs" in other District school evaluations) to provide ease of circulation by providing a multiple connections with the spokes *(Figure 3. View of Canopied Concentric Arc Pathways of Circulation Plan, SOCES Campus)*. The western half of the plan encompasses canopied pathway fingers and classroom buildings that project to the west from the central axis. The classroom buildings in both halves serve as modules that run parallel and attached to the canopied pathways, with entrances to the pathways located along their long sides. This circulation and building plan dominates the entire southern half of the SOCES campus property site and forms the basis of the historic core; the Physical Education Building and athletic fields dominate the top of the school site and do not continue the 1953–1955 circulation design pattern of the campus core.

Figure 1. View of Entrance Patio and Central Axis, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 2. View of Concrete Podium, "Hub" of Radiating Campus Core Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 3. View of Canopied Concentric Arc Pathways of Circulation Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Except for some outward-facing elements along the southwest corner of the campus, the entire main campus core is primarily a low-massed (1-story) design. The entire main campus core provides consistent massing and rhythm to the classroom buildings and open spatial relationships along the "fingers" and "spokes" of the circulation plan *(Figure 4. View of Radiating Pathways of Southeast Circulation Plan, SOCES Campus)*. The consistent landscaping design, with its wide, smooth-concrete pathways topped by canopied roofs supported by steel pipe columns, unifies the campus and is a major element of the original campus design created by the architects *(Figure 5. View of Southeast Area of Radiating Campus Canopied Pathways, SOCES)*.

Figure 4. View of Radiating Pathways of Southeast Circulation Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 5. View of Southeast Area of Radiating Campus Canopied Pathways, SOCES Campus

SOURCE: *Sapphos Environmental, Inc., 2017*

The classroom buildings that are repeated throughout the hybrid finger- and cluster-plan feature Mid-Century Modern inspired architectural design and materials. As mentioned, the form of all classroom buildings is linear, with tall and short long sides defined by shed-roofs that run the full width of the buildings; the effect is to create white-stuccoed, wedge-shaped modules within the campus design. Typical classrooms come in two lengths: classroom buildings A, B, F, J, K, L, and the Arts and Crafts Building are the longer, while buildings C, D, M, and the Counseling Building are the shorter. Both lengths of these typical classroom buildings feature entrances and clerestory windows on their tall "front" pathway sides *(Figure 6. View of Typical Classroom Blocks of Campus Core Plan, SOCES Campus);* and grouped strips of 4-over-4 double hung window sash on their short back sides *(Figure 7. View of Rear Wall Window Groupings on Typical Classrooms, SOCES Campus)*. Atypical buildings along the fingers include Industrial Arts Buildings 1 and 2, and the Choral and Instrumental Music buildings. These buildings are short but taller at 1.5 stories and wider as well. They are the only classroom buildings to feature front entrances on their short sides, with their strips of clerestory windows atop otherwise blank, tall, back walls *(Figure 8. Rear View North of Atypical Classroom: Instrumental Music Building, SOCES Campus)*. Industrial Arts Building 2 also includes a low flat-roofed portion behind its canopied pathways that houses groups of student lockers.

Figure 6. View of Typical Classroom Blocks of Campus Core Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 7. View of Rear Wall Window Groupings on Typical Classrooms, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 8. Rear View North of Atypical Classroom: Instrumental Music Building, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

While the Administration Building shares its form with the typical, short-length classrooms types, it is the only classroom to be sited outside of the finger plan, along the southern primary public face of the school on either side of the main entrance and parallel to the street *(Figure 9. South View of Administration Building from Exterior of Campus, SOCES).* Its character-defining features are similar to all other examples of its type except for two important exceptions: It has limited clerestory lights above its canopied pathway front entrance; and it has been provided a rear, campus core-facing entrance in addition to its outward facing entrance. The rest of the outward face of the campus along the southern perimeter of the main core includes a full-length canopied pathway backed by a red brick veneer. The brick runs along the face of each façade of street-facing buildings to suggest a solid half-wall that is unbroken except at the point it meets the main campus entrance. Beyond the entrance the false red brick wall trim becomes a genuine brick wall until it meets the cafeteria building *(Figure 10. Exterior View of Front Wall of Campus Core, SOCES Campus)*. At the main entrance the brick wall becomes two tall brick "book-ends" that flank the security gate opening which allows entry to the primary south-north main axis of the campus core plan *(Figure 11. View of Main Entrance, SOCES Campus)*. Behind each entrance bookend, the Library Building lines the initial west flank of the central entry axis path, while the Counseling Building runs along the east. The principal wing of the 'L'-plan Library Building is the only element in the complex to feature a gabled roof. The very shallow pitch gable is an almost unnoticeable variation, but was apparently included to distinguish the building from others at the campus entrance *(Figure 12. View of Library Building Entrance, SOCES Campus)*. Its gable end faces to the east along the canopied pathway and includes the primary entrance to the Library Building.

Figure 9. South View of Administration Building from Exterior of Campus, SOCES.
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 10 . Exterior View of Front Wall of Campus Core, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 11. View of Main Entrance, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 12. View of Library Building Entrance, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

A more unique white stuccoed and shed-roofed building in the main campus core is the tiny book store, which—with its small dimensions and multiple metal service windows—could be mistaken for a 1950s fast-food restaurant. Nevertheless its consistency with the classrooms contributes to the unified appearance of the campus core plan *(Figure 13. View of School Bookstore, SOCES Campus)*. An adjacent square, 1.5-story, flat-topped concrete cafeteria building with attached flat-roofed pavilion is less compatible *(Figure 14. Interior Campus Core View of Cafeteria, SOCES Campus)*, especially from the exterior of the campus where it is a part of the "front" line of buildings that form the formal public face of the campus *(Figure 15. South Exterior View of Cafeteria Building, SOCES Campus)*.

Figure 13. View of School Bookstore, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 14. Interior Campus Core View of Cafeteria, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Figure 15. South Exterior View of Cafeteria Building, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

The Physical Education Building is, along with the school's 1954 Bauer Auditorium, one of the two large anchor buildings at the campus that balance campus compatibility with individual identities. Despite being erected during the same period as the rest of the campus, both buildings possess massing and aesthetics somewhat inconsistent with the low-massed campus core *(Figure 16. View of Physical Education Building across Radiating Courtyard, SOCES Campus)*. While the two buildings share the brick trim of some of the public exterior areas of the largely-white-stuccoed campus core, both are constructed of different materials (concrete and steel) than the rest of the campus; both are walled with little fenestration leaving them closed off within an indoor-outdoor campus design; both are substantially different in form from the classroom buildings; and both are only marginally within the intended circulation area of the main campus core.

Figure 16. View of Physical Education Building across Radiating Courtyard, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

The barrel-vaulted Physical Education Building's placement along border between the northern athletics half of the campus and the southern classroom area makes it a visible if somewhat distant-feeling element within the campus. In the case of the Physical Education Building, the radiating plan seems to lead visitors away rather than encourage entry. When combined with the solid nature of the building's solid central core and dominant use of brick panels; and the canopied pathway running along the front that seems to be the only example to suggest a fence rather than a portal, the building seems less important than its scale would imply.

The Bauer Auditorium, while an interesting and stylized variation of the Mid-Century Modern style on its own, seems perhaps the most orphaned of all campus buildings. It is purely outward-facing; canted slightly to the southwest; sits largely outside the campus security fence; and appears as solid as a bank vault. The building consists of an un-fenestrated 2-story body block, fronted by a 1.5-story height rectangular entrance lobby that is almost equally as solid. The lobby element is served by a projecting five-step concrete staircase flanked by square red brick planters. The lobby façade consists of five deeply recessed entrances topped by a concrete porch roof supported by large and thick red brick piers. Above the entrances is a large and slightly-recessed red brick paneled area, above which is a full-width strip of contrasting-colored cooling louvers. Curved, 1-story corner wing walls provide some relief form the flat planes of the building and assist in welcoming guest to the entrance *(Figure 17. View of Bauer Auditorium Entrance, SOCES Campus).*

Figure 17. View of Bauer Auditorium Entrance, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Overall, the main campus core portrays a unified face of open and canopied pathways and white classroom modules that offers an intriguing rhythm and balance of building placement and open space, especially at the radiating portion of the plan. The choice to employ red brick at the exterior, picked-up little within the campus core except for its use on the Physical Education Building and a few patio walls, seems a decision to address the local architecture of the campus's residential setting.

Non-Historic Features

Blacktopped hardscaped areas between buildings sited in the western half of the campus core plan likely replaced original green space, although no evidence remains to suggest whether they remained dirt until paved *(Figure 18. View of Hardscape through Open Space Between Buildings, West Side of Campus Core Plan, SOCES Campus)*. Temporary and/or portable classroom modules are also present to the northeast of the campus core along its outer perimeter and along the athletic court area.

Figure 18. View of hardscape through Open Space Between Buildings, West Side of Campus Core Plan, SOCES Campus
SOURCE: *Sapphos Environmental, Inc., 2017*

Significance Criteria

A significant historical resource as defined by CEQA is a property that is listed in, or eligible for listing in, the CRHR. Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[10] Certain properties, including those listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) and California Historical Landmarks (CHLs) numbered 770 and higher are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:[11]

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

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[10] *California Public Resources Code*, Section 5024.1(a).

[11] *California Public Resources Code*, Section 5024.1(c).

Criterion 3: It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data.[12] Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.[13]

District Eligibility Standards

- Clearly embodies the characteristics of a postwar modern functionalist school campus
- Displays a unified, functional site design, with buildings extending across the site and oriented in relation to outdoor spaces (courtyards, patios, outdoor play areas)
- One-story massing for elementary schools; up to two-stories for junior/high schools
- Classrooms, in detailing and plans, clearly express their function, with axial, fingerlike wings, plentiful fenestration, and connections to the outdoors
- Retains most of the associative and character-defining features from the period of significance[14]

Evaluation of Significance

For the purposes of this evaluation, the "main campus core" refers to the original surviving 1954–1955 campus plan located primarily at the southern half of the SOCES campus site that includes the Physical Education Building but none of the northern athletic area.

This investigation confirmed that the primary 1954–1955 SOCES campus, including planned circulation elements and covered walkways; original landscaping; concrete stage; brick walls; surviving pipe rails; and all contributing buildings (Administrative Building, Counseling Building; Library; Auditorium Building; Cafeteria; Student Store; Choral Music Building; Instrumental Music Building; Industrial Arts Buildings 1 and 2; Classroom Buildings A, B, and C; Sanitary Building D; Arts and Craft Building; Classroom F; Homemaking Building G; Classroom Buildings H, J, L, and M; the Physical Education Building; the Lath House; Agricultural Building; and Utility Building) is an intact 1954-1955 campus core design eligible for the CRHR. The SOCES campus core design displays an

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[12] Office of Historic Preservation. n.d. "Technical Assistance Bulletin 6: California Register and National Register, A Comparison (for purposes of determining eligibility for the California Register)." Available at: www.ohp.parks.ca.gov

[13] Office of Historic Preservation. n.d. "Technical Assistance Bulletin 6: California Register and National Register, A Comparison (for purposes of determining eligibility for the California Register)." Available at: www.ohp.parks.ca.gov

[14] Sourced from *Los Angeles Unified School Historic Resources Survey Report* by Sapphos Environmental, Inc., June 2014.

emphasis on strong design intent over use of high-style materials. Character-defining exterior features of the campus include, but are not limited to:

- Low-massing (1-story)
- Decentralized hybrid cluster- and finger-plan site design
- Asymmetrical plan with radiating paths and concentric arcs
- Rhythm of building placement and spatial relationships
- Primary south-north entrance axis
- Indoor-outdoor connections and relationships
- Wide concrete pathways
- Round, low concrete podium "hub"
- Canopied outdoor corridors and pathways supported by metal pipe columns
- Original pipe railings in some locations
- Spatial relationships between buildings
- Automobile drop-off separate but linked
- Primary perimeter buildings turned inward
- Stuccoed exteriors
- Shed roof configurations
- Original entrances
- Original fenestration with grouped and varied window sizes
- Courtyards and green space
- Use of partial brick walls for anchor buildings and at campus exterior locations.

These features provide evidence that SOCES clearly embodies the characteristics of a post-war modern functionalist school campus, with a unified campus displaying a strong emphasis on design, scale, circulation, and function. The main campus core displays great care in planning with 1-story massing is extended across the site, and an apparent emphasis on the purity of the design. The campus design has a strong design identity by relating the orthogonal, radiating, and curved circulation design elements with the linear, wedge-shaped classroom buildings that serve as the modular units of its hybrid finger- and cluster-plan design. The indoor-outdoor intention is manifested by the school's many windows, clerestories, canopied walkways, and public spaces that create that sense of place.

The main campus core of SOCES is eligible for listing under CRHR Criterion 1, in the context of institutional architecture/educational facilities in Los Angeles and theme of Educating the Baby Boom: Postwar Expansion and the Modern Functionalist School Plant, 1945-1969. As an intact, primarily 1-story, post-war, indoor-outdoor, finger-and-cluster hybrid plan school, significant for its hub-centric radiating southeast portion linked by concentric circles, the campus exemplifies District design ideal and principles of the era and also reflects the continuing post-war suburban expansion of the San Fernando Valley. The period of significance is from 1953 to 1955, the years that the former South Reseda Junior High School's was originally constructed.

SOCES does not appear eligible for CRHR Criterion 2, as no known association has been found with the lives of any persons important to local, California, or national history.

SOCES does not appear eligible for CRHR Criterion 3, as while its campus planning displays exceptional implementation of a Mid-Century Modern planning and circulation design using common materials, its architecture is not outstanding within the context of the many high-style and/or trendsetting postwar District campuses that survive in the San Fernando Valley, nor the exceptional work of a master-architect.

SOCES does not appear eligible for CRHR Criterion 4, as it is not a likely source for future information related to history or prehistory.

For the purposes of the theme, the campus conveys its significance and maintains its primary design and character-defining features consistently throughout the primary historic campus core site and circulation plan. To verify the ability of the SOCES campus to convey this, the campus was evaluated for seven aspects of integrity.

Statement of Integrity

The subject property was evaluated against the seven aspects of integrity as outlined in the California Code of Regulations, California Register of Historical Resources (Title 14, Division 3, Chapter 11.5, Section 4852(C)). It was evaluated for these seven aspects in conjunction with consideration of the District's "Integrity Considerations" for theme of *LAUSD - Educating the Baby Boom: The Postwar Modern Functionalist School Plant, 1945–1969*. The seven aspects of integrity include *location, design, setting, materials, workmanship, feeling* and *association*. The evaluated campus, landscaping, and associated buildings and structures retain their original *location* and has not been moved.

The original *design* of the campus remains largely intact. The open and built spaces remain largely as conceived. The overall designed layout and circulation paths remain as constructed between 1953 and 1955. The canopied walkways retain straight and curved shapes. The individual classroom buildings retain their linear groupings original window openings, their shed roof forms creating wedge shapes, and the locations for their entrance openings, as well as their placement along the paths or circulation. The walkways and round podium retain their original forms, and the locations for green areas remain in place, although it appears a few at the west campus core may have been hardscaped later. Despite the modular nature of the design, no new permanent classroom buildings have been added, and temporary and/or portable modules are located only on the very northwestern fringe of the historic campus core. The Physical Education and Auditorium buildings retain their separate identities and original scales as individual anchor buildings. Overall the sense of design is strongly preserved at SOCES.

The *setting* has remained largely 1- and 2-story single-family residential homes. The addition of temporary or portable classroom units within the campus site adds some complexity, but only at the very fringes of the site, and they therefore are removable additions.

The *materials* remain largely original, with the exception of the roofing. The individual classroom buildings retain their original steel and wood window and clerestory frames and sash. The canopied walkways retain their pipe columns and trim. Some original pipe railings survive. The individual classroom buildings retain their strips of original window openings, their light their entrance openings, and their placement along the paths or circulation. The walkways and round podium retain their original concrete finishes. Red brick remains as exterior wall trim along street-facing public elevations to the south and west, and at limited locations—largely as low garden walls—within the main campus. Only the addition of oddly-scaled brick pavers between walkways to form a small patio just within the main entrance draws attention as a new material. Overall the scale and detail integrity of the individual character-defining features have been well preserved at SOCES.

The *workmanship* present at the exterior of the structure conveys evidence of the technologies and style preferences of the Mid-Century era in which the SOCES campus was constructed. Stuccoed and brick walls all appear original, as does the concrete workmanship of the walkways and podium. The overall integrity of workmanship is relatively intact if often utilitarian in quality.

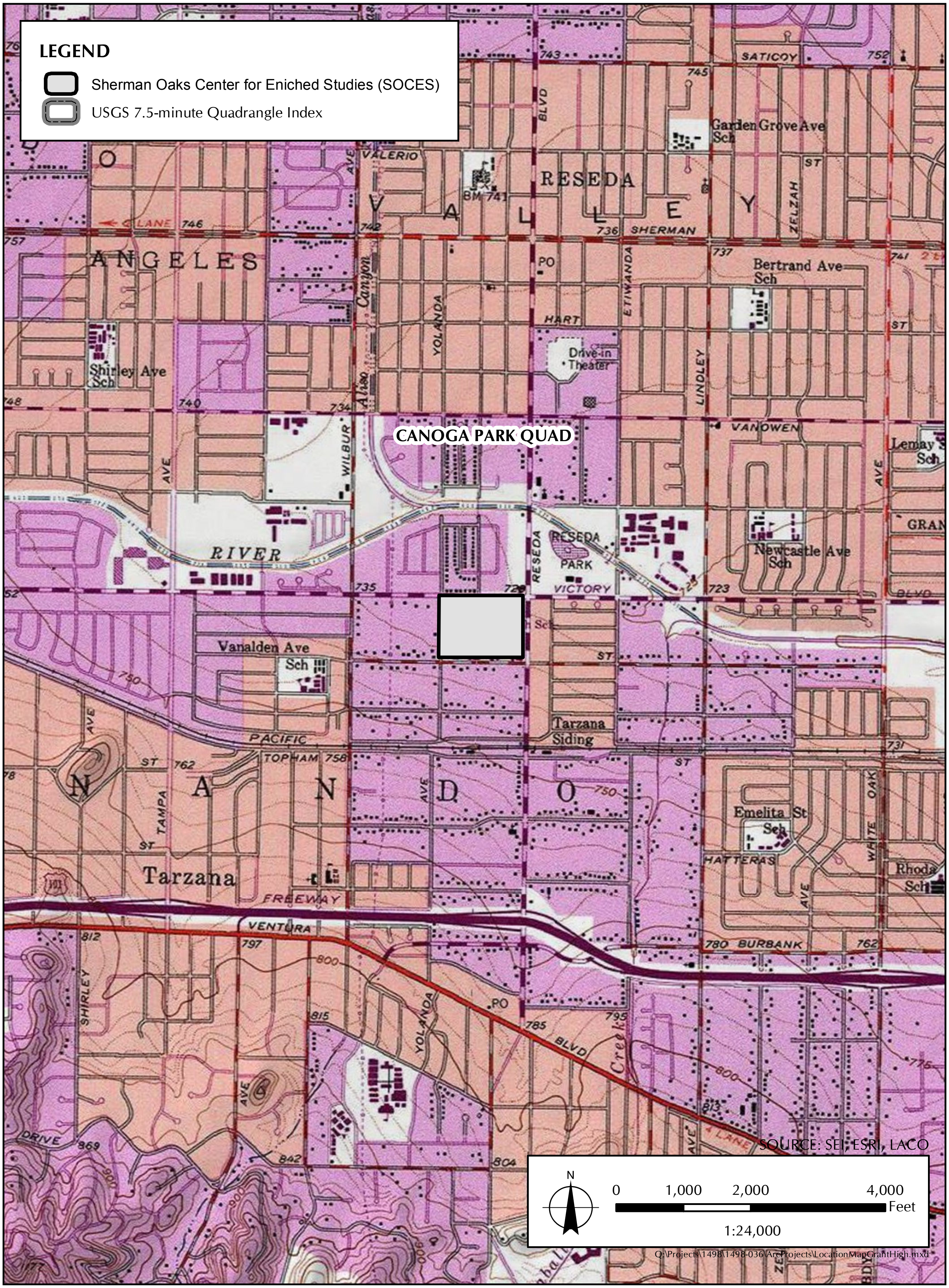
The *feeling* expressed by the exterior physical features conveys the property's historic character. The majority of the exterior character-defining elements of the primary design are intact, original, and convey the integrity of feeling. The primary design intent conveys feeling through the preservation of spatial relationships. At the SOCES campus, these spatial relationships are manifested through experiencing open and closed elements along the circulation routes; experiencing viewsheds along the circulation routes; and experiencing a sense of place at various locations throughout the campus, most especially within the radiating central "quad" area in front of the podium. The sense of feeling of the historic campus core is strong and most definitely intact from the 1953–1955 period.

The *association* the SOCES campus possesses has been affected by its revised function as a multi-grade magnet school. The modified function has introduced both elementary school level and high-school-level programs that are somewhat separated within the campus. Nevertheless, the relationships SOCES has within its own campus as product of the District system, and within its neighborhood context, is similar. The campus association remains much as it was during its historic function as a junior high school.

CONCLUSION

As a result of the investigation, the Sherman Oaks Center for Enriched Studies campus property was determined to be eligible for listing in the California Register of Historical Resources pursuant to Criterion 1. The campus was determined eligible based on the integrity of the historic material as exemplification of an intact, low-massed, post-war, indoor-outdoor, finger-and-cluster hybrid plan school consistent with the criteria established in the District Historic Context Statement. The campus exemplifies District design ideal and principles of the era. Therefore, the property is an historical resource for the purposes of Section 15064.5(a) of the California Environmental Quality Act Guidelines. Should there be any questions regarding the information contained in this MFR, please contact Mr. Donald M. Faxon at (626) 683-3547, ext. 151.

ATTACHMENT 1
PROJECT LOCATION MAP



LEGEND

▢ Sherman Oaks Center for Eniched Studies (SOCES)

▢ USGS 7.5-minute Quadrangle Index

SOURCE: SEI, ESRI, LACO

N

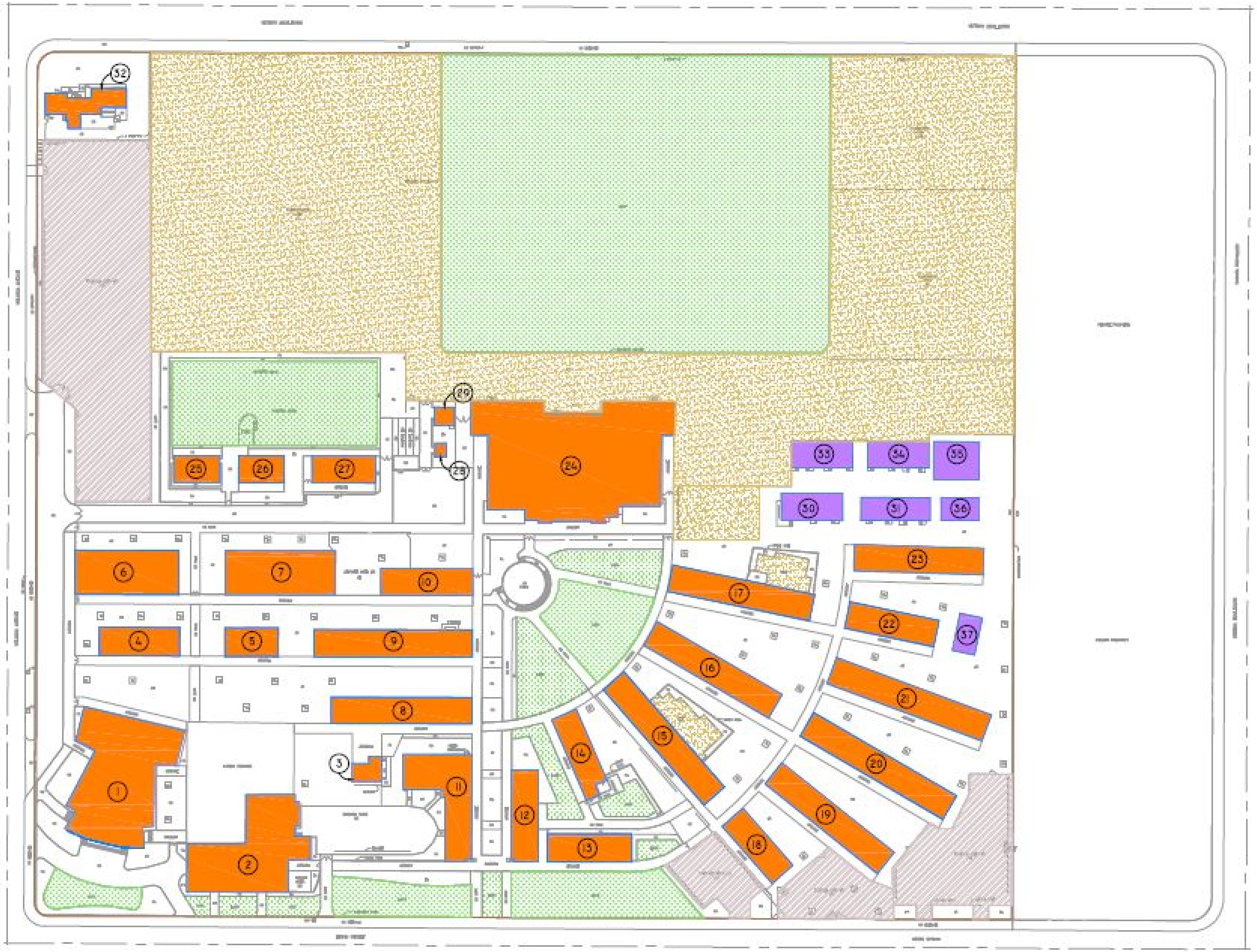
0 1,000 2,000 4,000 Feet

1:24,000

Q:\Projects\1498\1498-036\ArcProjects\LocationMapGrantHigh.mxd

ATTACHMENT 2

SHERMAN OAKS CENTER FOR ENRICHED STUDIES EXISTING SITE PLAN



EXISTING CAMPUS PLAN

PERMANENT & PORTABLES BUILDINGS

SOCES - LEGEND	
(25)	BUILDING NUMBER
🟧	PERMANENT
🟪	PORTABLE

NTS

ATTACHMENT 3
RESUMES OF PROJECT PERSONNEL

Sapphos
environmental inc

Donald M. Faxon, M.A.

Architectural Historian Preservation Specialist

Master of Arts (Historic Preservation), Savannah College of Art & Design, Savannah, Georgia 2014

Bachelor of Science (Public Communications), Boston University, Boston University, 1986

- *Cultural resources management and legal compliance*
- *History of California*
- *Identification and evaluation of the built environment*
- *Archival documentation*
- *Historic preservation consultation*
- *Historic treatment planning, monitoring, and management.*
- *Historic Structure reports and conditions assessment*
- *Scientific materials evaluation*

Years of Experience: 25

- *Society of Architectural Historians*
- *Former Cultural Heritage Commissioner, City of Sierra Madre*
- *Sigma Pi Kappa Historic Preservation Fellowship*
- *Architectural History*
- *Cultural History*

Donald M. Faxon has professional experience as both an Architectural Historian and Architectural Preservation Specialist. He served as Senior Historical Architect at a state office of historic preservation (SHPO) and as a city Cultural Heritage Commissioner; and has worked for the National Park Service and the National Trust for Historic Preservation. He has explained, interpreted, applied, and/or enforced the Secretary of the Interior's Standards in positions on both Coasts. His experience includes providing inventory, significance evaluations, re-use studies, and interpretation options; and architectural technical expertise in design review, visual and scientific condition assessments, preservation and conservation treatments, historic structure reports, project monitoring, compatible integration design for code required elements, and accessibility planning for the disabled. Additional skills include architectural project planning and monitoring. He has prepared technical reports for historical built environment resources to satisfy compliance requirements under CEQA, Section 106, and local ordinances.

Mr. Faxon has more than 25 years of experience as a historic preservation professional on projects involving a wide variety of building, structure and landscape styles and types, including agricultural, maritime, industrial, residential, commercial, transportation, civic, religious, entertainment, and military related resources.

Mr. Faxon's selected project experience includes:

- County and California State register evaluation for the Franklin Ranch Road Bridge in Goleta, Santa Barbara County
- CEQA evaluation of historical significance and design review of the proposed rehabilitation of 71 Palomar Street; San Luis Obispo, CA
- National Register and State Register evaluations of Los Angeles County Parks; Los Angeles, CA
- A context study of automotive-related architecture and Route 66 history of Old Town Pasadena, Pasadena, CA
- The administration and monitoring of Congressionally-funded seismic disaster grant projects at Castle Green Apartments, Pasadena; Shrine Auditorium, 665 Western Boulevard, Los Angeles; and Case Study House Number 18, 199 Chautauqua Blvd, Pacific Palisades, California
- Historic resources inventory and evaluation for Union Oil Avila Point Refinery, San Luis Obispo CA
- Field evaluations and recommendations for endangered properties at Rocky Mountain National Park, CO
- Evaluation of properties owned by the Preservation Society of Newport County (The Newport Mansions) for Americans with the Disabilities Act compliance; Newport, RI
- Evaluation of "Old State House" buildings and other properties owned by the State Government of Rhode Island for repair, restoration, and Americans with the Disabilities Act compliance, Providence, RI
- Planning of restoration options for the Governor Stephen Hopkins House followed by implementation of treatment recommendations, specifications, and project management; Providence, RI

Appendix D.
Energy Calculation Worksheets

OFF-ROAD 2011: Phase 1 Construction Equipment Fuel Use

Phase Name[a]	Equipment Type[a]	Units[a]	Hours[a]	Number of Days[a]	Hours of Operation	Horse Power[a]	Load Factor[a]	Gallons / bhp-hr[b]	Gallons
Asphalt Demolition	Air Compressors	2	8	21	336	78	0.48	0.096	1,211
	Crushing/Proc. Equipment	3	8	21	504	85	0.78	0.096	3,217
	Excavators	1	8	21	168	158	0.38	0.120	1,208
	Skid Steer Loaders	1	8	21	168	65	0.37	0.096	389
	Tractors/Loaders/Backhoes	1	8	21	168	97	0.37	0.096	580
Site Preparation	Excavators	1	8	44	352	158	0.38	0.120	2,532
	Plate Compactors	1	8	44	352	8	0.43	0.121	146
	Rollers	2	8	44	704	80	0.38	0.096	2,060
	Tractors/Loaders/Backhoes	2	8	44	704	97	0.37	0.096	2,432
	Trenchers	1	8	44	352	78	0.5	0.096	1,322
Building Construction	Air Compressors	1	8	259	2,072	78	0.48	0.096	7,468
	Bore/Drill Rigs	1	8	259	2,072	221	0.5	0.118	26,951
	Cement and Mortar Mixers	5	8	259	10,360	9	0.56	0.121	6,295
	Cranes	1	8	259	2,072	231	0.29	0.118	16,339
	Pumps	1	8	259	2,072	84	0.74	0.096	12,399
	Rough Terrain Forklifts	4	8	259	8,288	100	0.4	0.096	31,915
	Tractors/Loaders/Backhoes	2	8	259	4,144	97	0.37	0.096	14,318
Temporary Portables Installation	Cranes	1	8	45	360	231	0.29	0.118	2,839
Architectural Coating	Air Compressors	1	6	44	264	78	0.48	0.096	952
Paving	Cement and Mortar Mixers	8	8	43	2,752	9	0.56	0.121	1,672
	Pavers	1	8	43	344	130	0.42	0.120	2,250
	Rollers	1	8	43	344	80	0.38	0.096	1,007
	Tractors/Loaders/Backhoes	2	8	43	688	97	0.37	0.096	2,377
Temporary Portables Removal	Cranes	1	8	6	48	231	0.29	0.118	379
Building Demolition	Air Compressors	2	8	22	352	78	0.48	0.096	1,269
	Crushing/Proc. Equipment	3	8	22	528	85	0.78	0.096	3,370
	Excavators	1	8	22	176	158	0.38	0.120	1,266
	Tractors/Loaders/Backhoes	2	8	22	352	97	0.37	0.096	1,216
					41,096				149,378

Notes: bhp-hr = brake horsepower hour

Sources

a. CalEEMod 2016.3.1.

b. OFFROAD 2011. Based on 2017 emissions factors for equipment in the South Coast Air Basin

OFF-ROAD 2011: Phase 2 Construction Equipment Fuel Use

Phase Name[a]	Equipment Type[a]	Units[a]	Hours[a]	Number of Days[a]	Hours of Operation	Horse Power[a]	Load Factor[a]	Gallons / bhp-hr[b]	Gallons
Site Preparation	Excavators	1	8	45	360	158	0.38	0.120	2,589
	Plate Compactors	1	8	45	360	8	0.43	0.121	149
	Rollers	2	8	45	720	80	0.38	0.096	2,107
	Tractors/Loaders/Backhoes	2	8	45	720	97	0.37	0.096	2,488
	Trenchers	1	8	45	360	78	0.5	0.096	1,352
Building Construction HS	Air Compressors	1	8	130	1,040	78	0.48	0.096	3,748
	Bore/Drill Rigs	1	8	130	1,040	221	0.5	0.118	13,528
	Cement and Mortar Mixers	5	8	130	5,200	9	0.56	0.121	3,160
	Cranes	1	8	130	1,040	231	0.29	0.118	8,201
	Pumps	1	8	130	1,040	84	0.74	0.096	6,223
	Rough Terrain Forklifts	4	8	130	4,160	100	0.4	0.096	16,019
	Tractors/Loaders/Backhoes	2	8	130	2,080	97	0.37	0.096	7,187
Architectural Coating HS	Air Compressors	1	6	22	132	78	0.48	0.096	476
Demolition	Air Compressors	2	8	45	720	78	0.48	0.096	2,595
	Crushing/Proc. Equipment	3	8	45	1,080	85	0.78	0.096	6,893
	Excavators	1	8	45	360	158	0.38	0.120	2,589
	Skid Steer Loaders	1	8	45	360	65	0.37	0.096	833
	Tractors/Loaders/Backhoes	1	8	45	360	97	0.37	0.096	1,244
Building Construction ES	Air Compressors	1	8	130	1,040	78	0.48	0.096	3,748
	Bore/Drill Rigs	1	8	130	1,040	221	0.5	0.118	13,528
	Cement and Mortar Mixers	5	8	130	5,200	9	0.56	0.121	3,160
	Cranes	1	8	130	1,040	231	0.29	0.118	8,201
	Pumps	1	8	130	1,040	84	0.74	0.096	6,223
	Rough Terrain Forklifts	4	8	130	4,160	100	0.4	0.096	16,019
	Tractors/Loaders/Backhoes	2	8	130	2,080	97	0.37	0.096	7,187
Architectural Coating ES	Air Compressors	1	6	22	132	78	0.48	0.096	476
Temporary Portables Removal	Cranes	1	8	6	48	231	0.29	0.118	379
Paving	Cement and Mortar Mixers	8	8	44	2,816	9	0.56	0.121	1,711
	Pavers	1	8	44	352	130	0.42	0.120	2,302
	Rollers	1	8	44	352	80	0.38	0.096	1,030
	Tractors/Loaders/Backhoes	2	8	44	704	97	0.37	0.096	2,432
					41,136				147,777

Notes: bhp-hr = brake horsepower hour

Sources

a. CalEEMod 2016.3.1.

b. OFFROAD 2011. Based on 2017 emissions factors for equipment in the South Coast Air Basin

OFF-Road Vehicles: OFFROAD2011 Brake-Specific Fueld Consumption

Phase 1

			Brake Specific Fuel Consumption (gallons per year)	Hours/Year	Gallons/Hr	Gallons/bhp-hr
AirBasin	Equipment Class	Horsepower Bin	Base BSFC	Base Activity		
SC	Construction and Mining	50	20164926.89	3345126.95	6.03	0.121
SC	Construction and Mining	120	122929311	10641199.7	11.55	0.096
SC	Construction and Mining	175	83343322.75	3975641.27	20.96	0.120
SC	Construction and Mining	250	97126231.82	3300433.65	29.43	0.118
SC	Construction and Mining	500	199178133.2	3962428.67	50.27	0.101
SC	Construction and Mining	750	57846947.13	641668.367	90.15	0.120
SC	Construction and Mining	1000	14109350.85	114450.242	123.28	0.123
SC	Construction and Mining	9999	20805492.96	81839.1976	254.22	0.025

Source: OFFROAD. Based on 2017 average construction fleet fuel economy by bhp-hr for construction equipment in the South Coast Air Basin.

bhp-hr: brake horsepower hour

On-Road Vehicles: Phase 1 Construction

Phase	Number of Daily Trips	Number of Days	Average Round-Trip Commute Distance (Miles)	TOTAL VMT
Worker Trips (Gasoline)				
Asphalt Demolition	20	21	14.7	6,174
Site Preparation	18	44	14.7	11,642
Building Construction	37	259	14.7	140,870
Temporary Portables Installation	3	45	14.7	1,985
Architectural Coating	7	44	14.7	4,528
Paving	30	43	14.7	18,963
Temporary Portables Removal	3	6	14.7	265
Building Demolition	20	22	14.7	6,468
TOTAL				190,894
Hauling Trips (Diesel)				
Asphalt Demolition	5	21	20	2,220
Site Preparation	35	44	20	30,800
Building Demolition	15	22	20	6,480
				39,500

Source: CalEEMod Model Data

On-Road Vehicles: Phase 2 Construction

Phase	Number of Daily Trips	Number of Days	Average Round-Trip Commute Distance (Miles)	TOTAL VMT
Worker Trips (Gasoline)				
Site Preparation	18	45	14.7	11,907
Building Construction HS	27	130	14.7	51,597
Architectural Coating HS	5	22	14.7	1,617
Demolition	20	45	14.7	13,230
Building Construction ES	27	130	14.7	51,597
Architectural Coating ES	5	22	14.7	1,617
Temporary Portables Removal	3	6	14.7	265
Paving	30	44	14.7	19,404
				151,234
				Total Ga
Hauling Trips (Diesel)				
Site Preparation	34	45	20	30,800
Demolition	2	45	20	1,880
				32,680
				Total

Source: CalEEMod Model Data

On-Road Vehicles: EMFAC 2014 Average Fuel Efficiency

Phase 1

Worker Total VMT	Haul Total VMT	TOTAL
190,894	39,500	230,394

calendar year	season month	sub area	vehicle class	Fuel Use (1000 gallons)	vmt	Miles/ Gallon	Construction Fleet Mix	VMT by Fleet	Gallons/ Total
2017	Annual	Los Angeles (SC)	LDT1 (0-3750 lbs)	510.4531483	10,657,317	20.9	20%	38,179	1,829
2017	Annual	Los Angeles (SC)	LDT2 (3751-5750 lbs)	2475.972576	45,425,268	18.3	80%	152,715	8,324
2017	Annual	Los Angeles (SC)	T7 Tractor Construction	27.63723346	159,857	5.8	100%	39,500	6,829
								230,394	16,982

average fuel economy Construction On-Road Vehicles 13.57

Source: EMFAC2014. Based on 2017 average fleet fuel economy.

Fleet mix assumes construction workers typically drive work trucks rather than other types of light duty automobiles

Phase 2

Worker Total VMT	Haul Total VMT	TOTAL
151,234	32,680	183,914

calendar year	season month	sub area	vehicle class	Fuel Use (1000 gallons)	vmt	Miles/ Gallon	Construction Fleet Mix	VMT by Fleet	Gallons/ Total
2017	Annual	Los Angeles (SC)	LDT1 (0-3750 lbs)	510.4531483	10,657,317	20.9	20%	30,247	1,449
2017	Annual	Los Angeles (SC)	LDT2 (3751-5750 lbs)	2475.972576	45,425,268	18.3	80%	120,987	6,595
2017	Annual	Los Angeles (SC)	T7 Tractor Construction	27.63723346	159,857	5.8	100%	32,680	5,650
								183,914	13,693

average fuel economy Construction On-Road Vehicles 13.43

Source: EMFAC2014. Based on 2017 average fleet fuel economy.

Fleet mix assumes construction workers typically drive work trucks rather than other types of light duty automobiles

Appendix E.
Standard Conditions of Approval

Los Angeles Unified School District

Standard Conditions of Approval

Sherman Oaks Center for Enriched Studies Comprehensive Modernization

February 2018

Standard Conditions of Approval

The following Standard Conditions of Approval have been updated since the adoption of the 2015 version in order to incorporate and reflect changes in the recent laws, regulations, and the Los Angeles Unified School District's standard policies, practices, and specifications.

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
AESTHETICS								
☒	SC-AE-1	Degradation of neighborhood character	Demolition of historic building or construction of a new building	During project design (Planning)	School Design Guide. This document outlines measures for re-use rather than destruction of historical resources. Requires the consideration of architectural appearance/consistency and other aesthetic factors during the preliminary design review for a proposed school upgrade project. Architectural quality must consider compatibility with the surrounding community.	School Design Guide. Los Angeles Unified School District. Current Version.	Design Team; Construction Contractor	Signature Title: Date:
☐	SC-AE-2	Degradation of neighborhood character	May increase graffiti and accumulation of rubbish and debris along the walls adjacent to public rights-of-way	During project operation (Planning, Construction & Post-Construction)	School Design Guide. This document outlines measures to reduce aesthetic impacts around schools, such as shrubs and ground treatments that deter taggers, vandal-resistant and graffiti-resistant materials, painting, etc.	School Design Guide. Los Angeles Unified School District. Current Version.	Design Team; Construction Contractor and LAUSD, FSD, M&O	Signature Title: Date:
☐	SC-AE-3	Degradation of neighborhood character and viewshed obstruction	Increase density, height, bulk, or decrease setback compared to the surrounding neighborhood; increase opportunities for graffiti	During project design (Planning)	LAUSD shall assess a proposed project's consistency with the general character of the surrounding neighborhood, including any proposed changes to the density, height, bulk, and setback of new building (including stadium), addition, or renovation. Where feasible, LAUSD shall make appropriate design changes to reduce or eliminate viewshed obstruction and degradation of neighborhood character. Such design changes could include, but are not limited to, changes to campus layout, height of buildings, landscaping, and/or the architectural style of buildings.	2004 New Construction Program EIR Mitigation Measure AE-1.1, adopted by the Board of Education on June 2004.	Design Team; Construction Contractor	Signature Title: Date:
☐	SC-AE-4	Outdoor signs with electronic message display	Install or change a school marquee	Prior to final design and prior to and during installation	Marquee Signs Bulletin BUL-5004.1. This policy provides guidance for the procurement and installation of marquee signs (outdoor sign with electronic message display) on District campuses. The policy includes requirements for the design, approval, placement, operation, and maintenance of electronic school marquees erected and operated at a LAUSD schools. The policy also includes measures to mitigate light and glare, such as the use of "luminaries" in connection with school construction.	School marquees (outdoor sign with electronic message display). BUL-5004.1 adopted May 25, 2010.	Design Team; Construction Contractor	Signature Title: Date:
☐	SC-AE-5	Shadows	Construction of buildings or	Prior to project	OEHS CEQA Specification Manual, Appendix F, Protocol for Shadow	LAUSD OEHS CEQA Specification Manual,	LAUSD OEHS	

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
			structures taller than surrounding neighborhood	approval	Analysis in CEQA Documents for Proposed School Sites. This document outlines the methodology and impact thresholds for shadow analysis.	Appendix F, Protocol For Shadow Analysis In CEQA Documents For Proposed School Sites. December 2005, Revised June 2007.		Signature Title: Date:
☐	SC-AE-6	Light and glare	Generate additional light and/or glare	During and after installation of lights (Construction)	School Design Guide. This document outlines requirements for lighting and measures to minimize glare for pedestrians, drivers and sports teams, and to avoid light spilling onto adjacent properties.	School Design Guide. Los Angeles Unified School District. Current Version.	Design Team; Construction ContractorDesign Team; Construction Contractor	Signature Title: Date:
☒	SC-AE-7	Light and glare	Generate additional light and/or glare	Prior to building occupation, first stadium event, or first use of lights (Construction)	LAUSD shall reduce the lighting intensity from the new sources on adjacent residences to no more than two foot-candles, measured at the residential property line. LAUSD shall utilize hoods, filtering louvers, glare shields, and/or landscaping as necessary to achieve the standard. The lamp enclosures and poles shall also be painted to reduce reflection. Following installation of lights the lighting contractor shall review and adjust lights to ensure the standard is met.	2004 New Construction Program EIR Mitigation Measure AE-1.2, adopted by the Board of Education on June 2004.	Design Team; Construction ContractorDesign Team; Construction Contractor	Signature Title: Date:
☒	SC-AE-8	Light and glare	Generate additional light and/or glare	Prior to building occupation, first stadium event, or first use of lights (Construction)	Design site lighting and select lighting styles and technologies to have minimal impact off-site and minimal contribution to sky glow. Minimize outdoor lighting of architectural and landscape features and design interior lighting to minimize trespass outside from the interior. International Dark-Sky Association (IDA) and the Illuminating Engineering Society (IES) Model Lighting Ordinance (MLO) shall be used a guide for environmentally responsible outdoor lighting. The MLO outdoor lighting has outdoor lighting standards that reduce glare, light trespass, and skyglow. The Joint IDA-IESNA Model Outdoor Lighting Ordinance (MLO) uses lighting zones (LZ0-4) which allow the District to vary the stringency of lighting restrictions according to the sensitivity of the area as well as consideration for the community. The MLO also incorporates the Backlight-Uplight-Glare (BUG) rating system for luminaires, which provides more effective control of unwanted light. IDA-IESNA Model establishes standards to: • Limit the amount of light that can be used • Minimize glare by controlling the amount of light that tends to create glare	Based on The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. SS5.1: Light Pollution Reduction. Includes additional language from International Dark-Sky Association (IDA).	Design Team; Construction ContractorDesign Team; Construction Contractor	Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					• Minimize sky glow by controlling the amount of uplight • Minimize the amount of off-site impacts or light trespass			
AIR QUALITY								
☐	SC-AQ-1	Air Toxics Health Risk	Place new classrooms or outdoor play areas: -Within ¼-mile of mobile and stationary emission sources -Within 500 feet of a major transportation corridor (freeway, major rail line) -Within 500 feet of a major stationary source of emissions on the LAUSD priority list of schools most at risk from air pollution -Near a high-risk facility previously identified by the OEHS.	Prior to project approval (Planning)	OEHS CEQA Specification Manual, Appendix J, Air Toxics Health Risk Assessment (HRA). This document includes guidance on HRA protocols for permitted, nonpermitted, and mobile sources that might reasonably be anticipated to emit hazardous air emissions and result in potential long-term and short-term health impacts to student and staff at the school site.	LAUSD OEHS CEQA Specification Manual, Appendix J, Air Toxics Health Risk Assessment (HRA). December 2005, Revised June 2007.	LAUSD OEHS	________________ Signature Title: Date:
☒	SC-AQ-2	Construction Emissions	Requires the use of large construction equipment	During construction	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive emissions are not generated by unmaintained equipment.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the	Construction Contractor	________________ Signature Title:

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
						2004 Program EIR.		Date:
☒	SC-AQ-3	Construction Emissions	Requires a removal action for soil contamination	During construction	LAUSD's construction contractor shall: • Maintain slow speeds with all vehicles. • Load impacted soil directly into transportation trucks to minimize soil handling. • Water/mist soil as it is being excavated and loaded onto the transportation trucks. • Water/mist and/or apply surfactants to soil placed in transportation trucks prior to exiting the site. • Minimize soil drop height into transportation trucks or stockpiles during dumping. • During transport, cover or enclose trucks transporting soils, increase freeboard requirements, and repair trucks exhibiting spillage due to leaks. • Cover the bottom of the excavated area with polyethylene sheeting when work is not being performed. • Place stockpiled soil on polyethylene sheeting and cover with similar material. • Place stockpiled soil in areas shielded from prevailing winds.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	Construction Contractor Design Team; Construction Contractor	________________ Signature Title: Date:
☒	SC-AQ-4	Construction Emissions	Exterior construction and the use of large, heavy or noisy construction equipment	During planning and construction (Planning & Construction)	LAUSD shall prepare an air quality assessment: If site-specific review of a school construction project identifies potentially significant adverse regional and localized construction air quality impacts, then LAUSD shall implement all feasible measures to reduce air emissions below the South Coast Air Quality Management District's (SCAQMD) regional and localized significance thresholds. LAUSD shall mandate that construction bid contracts include the measures identified in the air quality assessment. Measures shall reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations. Specific air emission reduction measures include, but are not limited to, the following: Exhaust Emissions • Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM). • Consolidate truck deliveries and/or limit the number of haul trips per	2004 New Construction Program EIR Mitigation Measure AQ-2.1, adopted by the Board of Education on June 2004.	LAUSD OEHS and Design Team; Construction ContractorDesign Team; Construction Contractor	________________ Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					day. • Route construction trucks off congested streets. • Employ high pressure fuel injection systems or engine timing retardation. • Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or less (ULSD) in all diesel construction equipment. • Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower. • Restrict non-essential diesel engine idle time, to not more than five consecutive minutes. • Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction. • Utilize electric or alternatively fueled equipment, if feasible. • Utilize construction equipment with the minimum practical engine size. • Utilize low-emission on-road construction fleet vehicles. • Ensure construction equipment is properly serviced and maintained to the manufacturer's standards. Fugitive Dust • Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more). • Replace ground cover in disturbed areas as quickly as possible. • Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). • Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. • Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles.			

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					• Pave all construction access roads for at least 100 feet from the main road to the project site. • Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall. • Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content. • Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph). • Apply water at least three times daily, except during periods of rainfall, to all unpaved road surfaces. • Limit traffic speeds on unpaved road to 15 mph or less. • Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD. • Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials. • Limit the amount of daily soil and/or demolition debris loaded and hauled per day. • • General Construction • Utilize ultra-low VOC or zero-VOC surface coatings. • Phase construction activities to minimize maximum daily emissions. • Configure construction parking to minimize traffic interference. • Provide temporary traffic control during construction activities to improve traffic flow (e.g., flag person). • Develop a trip reduction plan for construction employees. • Implement a shuttle service to and from retail services and food establishments during lunch hours. • Increase distance between emission sources to reduce near-field emission impacts. • Require construction contractors to document compliance with the identified mitigation measures.			
☐	SC-AQ-5	Air Pollutant Emissions	Increases student	During school operation	LAUSD shall encourage ride-sharing programs for students and teachers as well as maintain fleet vehicles such as school buses,	LAUSD Best Management Practices, adopted by the	LAUSD OEHS	

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
			capacity and/or generates additional traffic		maintenance vehicles, and other service fleet vehicles in good condition in order to prevent significant increases in air pollutant emissions created by operation of a new school.	Board of Education on June 2004 as part of the 2004 Program EIR.	and School Administration	Signature Title: Date:
BIOLOGICAL RESOURCES								
☐	SC-BIO-1	Sensitive Species and Habitat	May affect sensitive species and/or their habitat within or near a project site Alter surface drainage in a way that affects sensitive species and/or their habitat	As part of the site-specific CEQA review process; agency coordination prior to the start of construction; monitoring during construction	LAUSD qualified biologist shall identify sensitive species and their habitat within or near proposed project site. LAUSD will conduct a literature search, which shall consider a one-mile radius beyond the project construction site and shall be performed by a qualified biologist with knowledge of local biological conditions as well as the use and interpretation of the data sources identified below. Where appropriate, in the opinion of the biologist, the literature search shall be supplemented with a site visit and/or aerial photo analysis. Resources and information that shall be investigated for each site should include, but not be limited to: • USFWS • National Marine Fisheries Services (NMFS) • CDFW • California Native Plant Society (CNPS) • County and/or city planning or environmental offices for sensitive species, habitat, and/or heritage trees that may not exist on published databases. • CNDDB • CNPS Rare Plant Inventory • Local Audubon Society • Los Angeles County Department of Regional Planning for information on Significant Ecological Areas • California Digital Conservation Atlas for district-wide location of reserves, plan areas, and land trusts that may overlap with project sites. Biological Resources Report If the LAUSD qualified biologist determines that a school construction project will affect an identified sensitive plant, animal, or habitat, a biological resources report shall be prepared. To provide a complete	2004 New Construction Program EIR Mitigation Measures B-1.1 and B-1.2, adopted by the Board of Education on June 2004. Recommendations as listed in CDFW SUP Draft EIR comment letter dated August 4, 2014.	LAUSD OEHS	Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					assessment of the flora and fauna within and adjacent to a site-specific project impact area, with particular emphasis on identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats, the biological resources report shall include the following. • Information on regional setting that is critical to the assessment of rare or unique resources • A thorough, recent floristic-based assessment of special status plans and natural communities, following the CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*. CDFW recommends that floristic, alliance- and/or association-based mapping and vegetation impact assessments be conducted at the project site and neighboring vicinity. The *Manual of California Vegetation (Sawyer et al.)* should also be used to inform this mapping and assessment. Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect6 impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions. • A current inventory of the biological resources associated with each habitat type onsite and within the area of potential effect. CDFW's California Natural Diversity Data Base (CNDDB) should be contacted to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. • An inventory of rare, threatened, and endangered, and other sensitive species onsite and within the area of potential effect. Species to be addressed should include all those identified in CEQA Guidelines Section 15380, including sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at appropriate time of year and time of day when sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the CDFW and USFWS. • A discussion of the potential adverse impacts from light, noise, human activity, exotic species, and drainage. Drainage analysis should address project-related changes on drainage patterns on and downstream from the site; the volume, velocity, and frequency			

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					of existing and post- project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site. • Discussions about direct and indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, wetland and riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a NCCP). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas. • Mitigation measures for adverse project-related impacts to sensitive plants, animals, and habitats. Measures should emphasize avoidance and reduction of biological impacts. For unavoidable impacts, onsite habitat restoration or enhancement should be outlined. If onsite measures are not feasible or would not be biologically viable, offsite measures through habitat creation and/or acquisition and preservation in perpetuity should occur. This measure should address restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc. • Plans for restoration and vegetation shall be prepared by qualified biologist with expertise in southern California ecosystems and native plant vegetation techniques. Plans shall include, at a minimum: - location of the mitigation site - plant species to be used, container sizes, and seeding rates - schematic depicting the mitigation area - planting schedule - irrigation method - measures to control exotic vegetation - specific success criteria - detailed monitoring program - contingency measures should the success criteria not be met - identification of the party responsible for meeting the success criteria and providing for conservation of the site in perpetuity. LAUSD shall consult with the U.S. Army Corps of Engineers, USFWS and/or the CDFW and comply with any permit conditions or directives			

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					from those agencies regarding the protection, relocation, creation, and/or compensation.			
☐	SC-BIO-2	Light Impacts to Sensitive Species	New outdoor lighting that is near sensitive species habitat	During lighting installation and prior to first use of lights (Construction)	LAUSD shall protect sensitive species from harmful exposure to light by shielding light sources, redirecting light sources, or using low intensity lighting.	2004 New Construction Program EIR Mitigation Measure B-1.3, adopted by the Board of Education on June 2004.	Design Team; Construction Contractor; Qualified Biologist	____________________ Signature Title: Date:
☒	SC-BIO-3	Bird and Bat Nesting Sites	Project site or construction staging are near and/or cause direct disturbances to native and nonnative vegetation, structures, and/or substrates during nesting season (February 1 through August 31; as early as January 1 for some raptors)	Prior to start of construction (Construction)	LAUSD shall comply with the following: • Project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates[1]) should occur outside of avian breading season to avoid take of birds or their eggs.[2] Depending on the avian species present, a qualified biologist may determine that a change in the breeding season dates is warranted. • If avoidance of the avian breeding season is not feasible, beginning 30 days prior to the initiation of the project activities, a qualified biologist with experience in conducting breeding bird surveys shall conduct weekly bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). The surveys shall continue on a weekly basis with the last survey being conducted no more than three days prior to the initiation of project activities. If a protected native bird is found, LAUSD shall delay all project activities within 300 feet of the suitable nesting habitat (within 500 feet for suitable raptor nesting habitat) until August 31. Alternatively, the qualified biologist could continue the surveys in order to locate any nests. If an active nest is located, project activities within 300 feet of the nest (within 500 feet for raptor nests), or as determined by a qualified biologist, shall be postponed until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting. Flagging, stakes, and/or construction fencing shall be used to demarcate the inside boundary of the 300- or 500-foot buffer between the project	2004 New Construction Program EIR Mitigation Measure B-1.4, adopted by the Board of Education on June 2004. Recommendations as listed in CDFW SUP Draft EIR comment letter dated August 4, 2014.	Design Team; Construction Contractor; Qualified Biologist	____________________ Signature Title: Date:

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[1] Substrate is the surface on which a plant or animal lives.

[2] Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill (Fish and Game Code Section 86), and includes take of eggs and/or young resulting from disturbances that cause abandonment of active nests.

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					activities and the nest. Project personnel, including all contractors working on site, shall be instructed on the sensitivity of the area. LAUSD shall provide results of the recommended protective measures to document compliance with applicable State and Federal laws pertaining to the protection of native birds. • If the qualified biologist determines that a narrower buffer between the project activities and observed active nests is warranted, a written explanation as to why (e.g., species-specific information; ambient conditions and birds' habituation to them; and the terrain, vegetation, and birds' lines of sight between the project activities and the nest and foraging areas) shall be submitted to LAUSD OEHS project manager. Construction contractors can then reduce the demarcated buffer. • No construction shall occur within the fenced next zone until the young have fledged, are no longer being fed by the parents, have left the nest, and will no longer by impacted the construction. • A biological monitor shall be present on site during all grubbing and clearing of vegetation to ensure that these activities remain outside the demarcated buffer and that the flagging, stakes, and/or construction fencing are maintained, and to minimize the likelihood that active nests are abandoned or fail due to project activities. The biological monitor shall send weekly monitoring reports to LAUSD OEHS project manager during the grubbing and clearing of vegetation, and shall notify LAUSD immediately if project activities damage avian nests.			
☐	SC-BIO-4	Native Oak Trees	Removal of any native mature oak trees or woodland habitat	During construction	LAUSD shall comply with the following: • Mitigation shall not include translocation of rare plants. CDFW, in most cases does not recommend translocation, salvage, and/or transplantation of rare, threatened, or endangered plant species, in particular oak trees, as compensation for adverse effects because successful implementation of translocation is rare. Even if translocation is initially successful, it will typically fail to persist over time. • Permanent conservation of habitat. To ensure the conservation of sensitive plant species, the preferred method is permanent conservation of habitat containing these species; any translocation proposed shall only be an experimental component of a larger, more robust plan.	2004 New Construction Program EIR Mitigation Measure B-3.1, adopted by the Board of Education on June 2004. Recommendations as listed in CDFW SUP Draft EIR comment letter dated August 4, 2014.	Design Team; Construction Contractor; Qualified Biologist	____________________ Signature Title: Date:

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					• **Off-site acquisition of woodland habitat**. Due to the inherent difficulty in creating functional woodland habitat with associated understory components, the preferred method is off-site acquisition of woodland habitat in the local area. All acquired habitat shall be protected under a conservation easement and deeded to a local land conservancy for management and protection. • **Creation of oak woodlands**. Any creation of functioning woodlands shall be of similar composition, structure, and function of the affected oak woodland. The new woodland shall mimic the function, demonstrate recruitment, plant density, and percent basil, canopy, and vegetation cover, as well as other measurable success criteria before the measure is deemed a success. -All seed and shrub sources used for tree and understory species in the new planting site shall be collected or grown from on-site sources or from adjacent areas and shall not be purchased from a supplier. This method should reduce the risk of introducing diseases and pathogens into areas where they might not currently exist. -Oaks should be replaced by planting acorns because this has been shown to result in greater oak survival. Monitoring efforts, including the exclusion of herbivores, shall be employed to maximize seedling survival during the monitoring period. -Monitoring period for oak woodland shall be at least 10 years with a minimum of seven years without supplemental irrigation. This allows the trees to go through one typical drought cycle. This should also be the minimal time needed to see signs of stress and disease and determine the need for replacement plantings. -LAUSD shall request CDFW review and comment on any translocation plans, habitat preservation, habitat creation and/or restoration plans.			
☐	SC-BIO-5	Wetlands, Riparian Habitat, and other Sensitive Natural Community	May affect wetlands, riparian habitat, and other sensitive natural community	As part of the site-specific CEQA review process; agency coordination prior to the start of construction;	LAUSD shall comply with CDFW recommendations as listed below:[3] • Project development or conversion that results in a reduction of wetland acreage or wetland habitat values shall not occur unless, at a minimum, replacement or preservation results in "no net loss" of either wetland habitat values or acreage. • All wetlands and watercourses, whether intermittent or perennial, should be retained and provided with substantial setbacks which	2004 New Construction Program EIR Mitigation Measures B-1.1 and B-1.2, adopted by the Board of Education on June 2004. Recommendations as listed	LAUSD OEHS	________________ Signature Title: Date:

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[3] Recommendations as listed in CDFW SUP Draft EIR comment letter dated August 4, 2014.

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
				monitoring during and after construction	preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations. • A jurisdictional delineation of creeks and their associated riparian habitats shall be conducted as part of the biological resources report. The delineation should be conducted pursuant to the USFWS wetland definition. • Implementation of recommended measures shall compensate for affected mature riparian corridors and loss of function and value of wildlife corridors.	in CDFW SUP Draft EIR comment letter dated August 4, 2014.		
CULTURAL RESOURCES								
☒	SC-CUL-1	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that are either designated or eligible for local, state, or federal landmark listing)	During project design, design development, pre-construction and construction (Planning & Construction)	Design Team to Include Qualified Historic Architect For campuses with qualifying historical resources under CEQA, the Design team shall include a qualified Historic Architect. The Historic Architect shall provide input to ensure ongoing compliance, as project plans progress, with the *Secretary of the Interior's Standards* and LAUSD requirements and guidelines for the treatment of historical resources (specific requirements follow in SC-CUL-2). For projects involving structural upgrades to historic resources, the Design team shall include a qualified Structural Engineer with a minimum of eight (8) years of demonstrated project-level experience in Historic Preservation. The Historic Architect/s shall meet the Secretary of the Interior's Professional Qualifications Standards and the standards described on page 8 of the *LAUSD Design Guidelines and Treatment Approaches for Historic Schools*. The Historic Architect shall provide input throughout the design and construction process to ensure ongoing compliance with the above-mentioned standards.	Los Angeles Unified School District Design Guidelines and Treatment Approaches for Historic Schools. January 2015. LAUSD OEHS CEQA Specification Manual, Appendix H, Historical Resources Policy, (Appendix E.2) LAUSD Cultural Resource Assessment Procedures. December 2005, Revised June 2007.	Design Team; Construction Contractor; Historic Architect	____________________ Signature Title: Date:

Standard Conditions of Approval

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☒	SC-CUL-2	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that are either designated or eligible for local, state, or federal landmark listing)	During project design, design development, pre-construction and construction (Planning & Construction)	Role of Historic Architect on Design Team The tasks of the Historic Architect on the Design team shall include (but not necessarily be limited to) the following: 1. The Historic Architect shall work with the Design team and LAUSD to ensure that project components, including new construction and modernization of existing facilities, continue to comply with applicable historic preservation standards, including the Secretary of the Interior's Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The Historic Architect shall work with the Design team throughout the design process to develop project options that facilitate compliance with the applicable historic preservation standards. 2. For new construction, the Historic Architect shall work with the Design team and LAUSD to identify options and opportunities for (1) ensuring compatibility of scale and character for new construction, site and landscape features, and circulation corridors, and (2) ensuring that new construction is designed and sited in such a way that reinforces and strengthens, as much as feasible, character-defining site plan features, landscaping, and circulation corridors throughout campus. 3. For modernization and upgrade projects involving contributing (significant) buildings or features, the Historic Architect shall work with the Design team and LAUSD to ensure that specifications for design and implementation of projects comply with the applicable historic preservation standards. 4. The Historic Architect shall participate in design team meetings through all phases of the project through 100 percent construction drawings, pre-construction, and construction phases. 5. The Historic Architect shall produce brief memos, at the 50 percent and 100 percent construction drawings stages, demonstrating how principal project components and treatment approaches comply with applicable historic preservation standards, including the Secretary of the Interior's Standards for the Treatment of Historic Properties and LAUSD Design Guidelines and Treatment Approaches for Historic Schools. The memos will be reviewed by LAUSD.	School Design Guide. Los Angeles Unified School District. Current Version. Los Angeles Unified School District Design Guidelines and Treatment Approaches for Historic Schools. January 2015.	Historic Architect	________________ Signature Title: Date:

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					6. The Historic Architect shall participate in pre-construction and construction monitoring activities to ensure continuing conformance with Secretary's Standards and/or avoidance of a material impairment of the historical resources. 7. The Historic Architect shall provide specialized Construction Specifications Institute (CSI) specifications for architectural features or materials requiring restoration, removal, or on-site storage. This shall include detailed instructions on maintaining and protecting in place relevant features. 8. The Design team and Historic Architect shall be responsible for incorporating LAUSD's recommended updates and revisions during the design development and review process.			
☒	SC-CUL-3	Treatment of Historical Resources	Project may directly or indirectly affect historical resources (i.e., buildings, structures, historic districts, and contributing site plan and landscaping features that are either designated or eligible for local, state, or federal landmark listing)	During project design, design development, pre-construction and construction (Planning & Construction)	School Design Guide and LAUSD Design Guidelines and Treatment Approaches for Historic Schools LAUSD has adopted policies and guidelines that apply to projects involving historic resources. The Design-Builder and Historic Architect shall apply these guidelines, which include the *LAUSD School Design Guide* and *LAUSD Design Guidelines and Treatment Approaches for Historic Schools* and the *Secretary's Standards* for all new construction and upgrade/modernization projects. In keeping with the district's adopted policies and goals, LAUSD shall re-use rather than destroy historical resources where feasible. LAUSD shall follow the guidelines outlined in these documents to the maximum extent practicable when planning and implementing projects and adjacent new construction involving historical resources. General guidelines shall include: • Retain and preserve the historic character of buildings, structures, landscapes, and site features that are historically significant. • Repair rather than remove, replace, or destroy character-defining features; if replacement is necessary, replace in-kind to match in materials and appearance. • Avoid removing, obscuring, or destroying character-defining features and materials. • Treat distinctive architectural features or examples of skilled	School Design Guide. Los Angeles Unified School District. Current Version. Los Angeles Unified School District Design Guidelines and Treatment Approaches for Historic Schools. January 2015.	Design Team; Construction Contractor; Historic Architect	________________ Signature Title: Date:

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					craftsmanship that characterize a building with sensitivity. • Conceal reinforcement required for structural stability or the installation of life safety or mechanical systems. • Undertake surface cleaning, preparation of surfaces, and other projects involving character-defining features using the least invasive, gentlest means possible. Avoid sandblasting and chemical treatments.			
☒	SC-CUL-4	Historical Resource Document	Demolition or potential damage to any recognized historic resources or any contributors to a historic district	Prior to demolition or major alteration (Planning & Construction)	Prior to demolition or mothballing activities, LAUSD shall retain a professional architectural photographer and a historian or architectural historian who meets the Secretary of the Interior's Professional Qualifications Standards to prepare HABS-like documentation for the historical resources slated for demolition. The HABS-like package will document in photographs and descriptive and historic narrative the historical resources slated for demolition. Documentation prepared for the package will draw upon primary- and secondary-source research and available studies previously prepared for the project. Measured drawings shall not be required for the project. The specifications for the HABS-like package follow: Photographs: Photographic documentation will focus on the historical resources/features slated for demolition, with overview and context photographs for the campus and adjacent setting. Photographs will be taken of interior and exterior features of the buildings using a professional-quality single lens reflex (SLR) digital camera with a minimum resolution of 10 megapixels. Photographs will include context views, elevations/exteriors, architectural details, overall interiors, and interior details (if warranted). Digital photographs will be printed in black and white on archival film paper and also provided in electronic format. Descriptive and Historic Narrative: The historian or architectural historian will prepare descriptive and historic narrative of the historical resources/features slated for demolition. Physical descriptions will detail each resource, elevation by elevation, with accompanying photographs, and information on how the resource fits within the	2004 New Construction Program EIR Mitigation Measure C-1.5, adopted by the Board of Education on June 2004.	Design Team; Construction Contractor; Historic Architect	__________________ Signature Title: Date:

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					broader campus during its period of significance. The historic narrative will include available information on the campus design, history, architect/contractor/designer as appropriate, area history, and historic context. In addition, the narrative will include a methodology section specifying the name of researcher, date of research, and sources/archives visited, as well as a bibliography. Within the written history, statements shall be footnoted as to their sources, where appropriate. Historic Documentation Package Submittal: The draft package will be assembled by the historian or architectural historian and submitted to LAUSD for review and comment. After final approval, one hard-copy set of the package will be prepared as follows: Photographs will be individually labeled and stored in individual acid-free sleeves. The remaining components of the historic documentation package (site map, photo index, historic narrative, and additional data) will be printed on archival bond, acid-free paper. Upon completion of the descriptive and historic narrative, all materials will be compiled in electronic format and presented to LAUSD for review and approval. Upon approval, one hard-copy version of the historic documentation package will be prepared and submitted to LAUSD. The historian or architectural historian shall offer a hardcopy package and compiled, electronic version of the final package to the Los Angeles Public Library (Central Library), Los Angeles Historical Society, and the South Central Coastal Information Center, to make available to researchers.			
☒	SC-CUL-5 & 6	Historical Resource Reuse	Demolition of any of the recognized historic structures	Prior to demolition or alteration (Construction)	LAUSD, consistent with Education Code Section 17540 and 17545, shall preserve, reuse, display, and/or offer for sale any remaining functional and defining features and building materials from the buildings. These materials could include items such as the school bell, chalkboards, lockers, plaques, doors, windows, siding, stones, lighting, doorknobs, hinges, cabinets, and appliances, among others as identified and listed in a preservation plan for the campus (these items may include items that are relevant to the campus community but are not character-defining features). They shall be made available to other agencies, other schools, and the public for sale and reuse, if features are not retained by LAUSD for reuse or display.	none	Design Team; Construction Contractor	____________________ Signature Title: Date:

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☒	SC-CUL-7	Archaeological Resource	Project area is deemed highly sensitive for archaeological resources	Prior to and during grading, excavation, or other ground-disturbing activities (Construction)	LAUSD shall retain a qualified archaeologist to be available on-call. The qualified archaeologist shall meet the Secretary of the Interior's Professional Qualifications Standards (48 Federal Register 44738–39).	none	Design Team; Construction Contractor; Qualified Archeologist	________________ Signature Title: Date:
☒	SC-CUL-8	Historic and Archaeological Resource	Historical or unique archaeological resources are discovered during construction activities	During grading, excavation, or other ground-disturbing activities (Construction)	The contractor shall halt construction activities in the immediate area and notify the LAUSD. LAUSD shall retain a qualified archeologist to make an immediate evaluation of significance and appropriate treatment of the resource. To complete this assessment, the qualified archeologist will be afforded the necessary time to recover, analyze, and curate the find. The qualified archeologist shall recommend the extent of archeological monitoring necessary to ensure the protection of any other resources that may be in the area. Construction activities may continue on other parts of the building site while evaluation and treatment of historical or unique archaeological resources takes place.	2004 New Construction Program EIR Mitigation Measure C-1.7, adopted by the Board of Education on June 2004.	Design Team; Construction Contractor; Qualified Archeologist	________________ Signature Title: Date:
☐	SC-CUL-9	Archaeological Resource Monitoring Program	Phase I Archaeological Site Investigation shows a strong possibility that unique resources, and/or unique architectural resources have been identified on a site	Prior to the start of construction	LAUSD shall implement an archaeological monitoring program for construction activities at a site prepared by a qualified archaeologist under the following conditions: (1) when a Phase I Site Investigation shows a strong possibility that unique archeological resources are buried on the site; and/or (2) when unique archaeological resources have been identified on a site, but LAUSD does not implement a Phase III Data Recovery/Mitigation Program because the resources can be recovered through the archaeological monitoring program.	2004 New Construction Program EIR Mitigation Measure C-1.8, adopted by the Board of Education on June 2004.	Design Team; Construction Contractor	________________ Signature Title: Date:
☒	SC-CUL-10	Archaeological Resource	Evidence of prehistoric or historic cultural resources is uncovered	During grading, excavation, or other ground-disturbing activities (Construction)	All work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist. The qualified archaeologist shall assess the find(s) and, if it is determined to be of value, shall draft a monitoring program and oversee the remainder of the grading program. Should evidence of prehistoric or historic cultural resources be found the archaeologist shall monitor all ground-disturbing activities related to the proposed project. Any significant archaeological resources found shall be preserved as determined necessary by the archaeologist and offered	none	Construction Contractor; Qualified Archeologist	________________ Signature Title: Date:

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					to a local museum or repository willing to accept the resource. Any resulting reports shall also be forwarded to the South Central Coastal Information Center at the California State University, Fullerton.			
☒	SC-CUL-11	Archaeological Resource	Project construction requires archaeological monitoring	Prior to the start grading, excavation, or other ground-disturbing activities (Construction)	Cultural resources sensitivity training shall be conducted by a qualified archaeologist for all construction workers involved in moving soil or working near soil disturbance. This training shall review the types of archaeological resources that might be found, along with laws for the protection of resources.	none	Construction Contractor; Qualified Archeologist	____________________ Signature Title: Date:
☒	SC-CUL-12	Archaeological Resource	Unique archaeological resources are discovered and LAUSD determines not to avoid them by abandoning the site or redesigning the project	During grading, excavation, or other ground-disturbing activities (Construction)	LAUSD shall determine whether it is feasible to prepare and implement a Phase III Data Recovery/Mitigation Program. A Phase III Data Recovery/Mitigation Program would be designed by a Qualified Archaeologist to recover a statistically valid sample of the archaeological remains and to document the site to a level where the impacts can be determined to be less than significant. All documentation shall be prepared in the standard format of the ARMR Guidelines, as prepared by the OHP. Once a Phase III Data Recovery/Mitigation Program is completed, an archaeological monitor shall be present on site to oversee the grading, demolition activities, and/or initial construction activities to ensure that construction proceeds in accordance with the adopted Phase III Data Recovery/Mitigation Program. The extent of the Phase III Data Recovery/Mitigation Program and the extent and duration of the archaeological monitoring program depend on site-specific factors.	2004 New Construction Program EIR Mitigation Measure C-1.9, adopted by the Board of Education on June 2004.	Design Team; Qualified Archeologist	____________________ Signature Title: Date:
☒	SC-CUL-13	Native American Resource	Evidence of Native American resources is uncovered	During grading, excavation, or other ground-disturbing activities (Construction)	All work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist and the local Native American representative has been contacted and consulted to assist in the accurate recordation and recovery of the resources.	none	Construction Contractor; Qualified Archeologist	____________________ Signature Title: Date:
☒	SC-CUL-14	Paleontological Resource	Cultural Resources Assessment identifies a project area as sensitive for paleontological	During grading, excavation, or other ground-disturbing activities (Construction)	LAUSD shall have a paleontological monitor on-call during construction activities. This monitor shall provide the construction crew(s) with a brief summary of the sensitivity, the rationale behind the need for protection of these resources, and information on the initial identification of paleontological resources. If paleontological resources are uncovered during construction, the on-call paleontologist shall be notified and afforded the necessary time and funds to recover, analyze, and curate the find(s).	2004 New Construction Program EIR Mitigation Measure C-1.10, adopted by the Board of Education on June 2004.	Construction Contractor; Paleontological Monitor	____________________ Signature Title: Date:

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			resources		Subsequently, the monitor shall remain on site for the duration of the ground disturbances to ensure the protection of any other resources that may be in the area.			
☐	SC-CUL-15	Paleontological Resource	Project area is deemed highly sensitive for paleontological resources	During grading, excavation, or other ground-disturbing activities	The paleontological monitor shall be on site for all ground altering activities and shall advise LAUSD as to necessary means of protecting potentially significant paleontological resources, including, but not limited to, possible cessation of construction activities in the immediate area of a find. If resources are identified during the monitoring program, the paleontologist shall be afforded the necessary time and funds to recover, analyze, and curate the find(s). Subsequently, the monitor shall remain on site for the duration of the ground disturbances to insure the protection of any other resources that may be in the area.	2004 New Construction Program EIR Mitigation Measure C-1.11, adopted by the Board of Education on June 2004.	Construction Contractor; Paleontological Monitor	Signature Title: Date:
ENERGY								
☒	SC-AQ-2	Construction Emissions	Requires the use of large construction equipment	During construction	LAUSD's construction contractor shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications, to ensure excessive emissions are not generated by unmaintained equipment.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	Construction Contractor	Signature Title: Date:
☒	SC-AQ-4	Construction Emissions	Exterior construction and the use of large, heavy or noisy construction equipment	During planning and construction (Planning & Construction)	LAUSD shall prepare an air quality assessment: If site-specific review of a school construction project identifies potentially significant adverse regional and localized construction air quality impacts, then LAUSD shall implement all feasible measures to reduce air emissions below the South Coast Air Quality Management District's (SCAQMD) regional and localized significance thresholds. LAUSD shall mandate that construction bid contracts include the measures identified in the air quality assessment. Measures shall reduce construction emissions during high-emission construction phases from vehicles and other fuel driven construction engines, activities that generate fugitive dust, and surface coating operations. Specific air emission reduction measures include, but are not limited to, the following: Exhaust Emissions • Schedule construction activities that affect traffic flow to off-peak hours (e.g. between 10:00 AM and 3:00 PM). • Consolidate truck deliveries and/or limit the number of haul trips per day.	2004 New Construction Program EIR Mitigation Measure AQ-2.1, adopted by the Board of Education on June 2004.	LAUSD OEHS; Design Team; Construction Contractor	Signature Title: Date:

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					• Route construction trucks off congested streets. • Employ high pressure fuel injection systems or engine timing retardation. • Utilize ultra-low sulfur diesel fuel, containing 15 ppm sulfur or less (ULSD) in all diesel construction equipment. • Use construction equipment rated by the United States Environmental Protection Agency as having Tier 3 (model year 2006 or newer) or Tier 4 (model year 2008 or newer) emission limits for engines between 50 and 750 horsepower. • Restrict non-essential diesel engine idle time, to not more than five consecutive minutes. • Utilize electrical power rather than internal combustion engine power generators as soon as feasible during construction. • Utilize electric or alternatively fueled equipment, if feasible. • Utilize construction equipment with the minimum practical engine size. • Utilize low-emission on-road construction fleet vehicles. • Ensure construction equipment is properly serviced and maintained to the manufacturer's standards. Fugitive Dust • Apply non-toxic soil stabilizers according to manufacturers' specification to all inactive construction areas (previously graded areas inactive for ten days or more). • Replace ground cover in disturbed areas as quickly as possible. • Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved roads (recommend water sweepers with reclaimed water). • Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip. • Pave construction roads that have a traffic volume of more than 50 daily trips by construction equipment, and/or 150 daily trips for all vehicles. • Pave all construction access roads for at least 100 feet from the			

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					main road to the project site. • Water the disturbed areas of the active construction site at least three times per day, except during periods of rainfall. • Enclose, cover, water twice daily, or apply non-toxic soil binders according to manufacturers' specifications to exposed piles (i.e., gravel, dirt, and sand) with a five percent or greater silt content. • Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour (mph). • Apply water at least three times daily, except during periods of rainfall, to all unpaved road surfaces. • Limit traffic speeds on unpaved road to 15 mph or less. • Prohibit high emission causing fugitive dust activities on days where violations of the ambient air quality standard have been forecast by SCAQMD. • Tarp and/or maintain a minimum of 24 inches of freeboard on trucks hauling dirt, sand, soil, or other loose materials. • Limit the amount of daily soil and/or demolition debris loaded and hauled per day. General Construction • Utilize ultra-low VOC or zero-VOC surface coatings. • Phase construction activities to minimize maximum daily emissions. • Configure construction parking to minimize traffic interference. • Provide temporary traffic control during construction activities to improve traffic flow (e.g., flag person). • Develop a trip reduction plan for construction employees. • Implement a shuttle service to and from retail services and food establishments during lunch hours. • Increase distance between emission sources to reduce near-field emission impacts. • Require construction contractors to document compliance with the identified mitigation measures.			
☒	SC-GHG-1	Water Use and Efficiency	Requires work on water pumps, valves,	During school operation (Post-	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping, and tanks to minimize water loss.	LAUSD Best Management Practices, adopted by the Board of Education on	LAUSD M&O	____________________ Signature Title:

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			piping, and/or tanks	Construction)		June 2004 as part of the 2004 Program EIR		Date:
☒	SC-GHG-2	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	______________ Signature Title: Date:
☒	SC-GHG-3	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	______________ Signature Title: Date:
☒	SC-GHG-4	Water Use and Efficiency	Requires work on landscape and/or irrigation system	Prior to full operation of irrigation system (Construction)	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Construction Waste Management. WE1.0C.P1 and LAUSD 2014 School Design Guide.	LAUSD M&O	______________ Signature Title: Date:
☒	SC-GHG-5	Energy Efficiency	Building construction	Prior to occupancy (Planning & Construction)	LAUSD shall ensure that the time dependent valued energy of the proposed project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the project is submitted to the Division of the State Architect.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments.	Design Team; LAUSD FSD; M&O	______________ Signature Title: Date:

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						Prerequisite. Energy Efficiency. EE1.0C.P1 and LAUSD 2014 School Design Guide.		
GEOLOGY and SOILS								
☒	SC-GEO-1	Seismic Hazards	Requires grading, excavation, or other ground-disturbing activities	During project design, and project construction (Planning & Construction)	OEHS CEQA Specification Manual, Appendix G, Supplemental Geohazard Assessment Scope of Work. This document outlines the procedures and scope for LAUSD geohazard assessments.	LAUSD OEHS CEQA Specification Manual, Appendix G, Supplemental Geohazard Assessment Scope of Work. December 2005, Revised June 2007.	LAUSD OEHS; Geotechnical firm	__________________ Signature Title: Date:
GREENHOUSE GAS EMISSIONS								
☒	SC-USS-1	Construction Waste Management	Generate construction and/or demolition debris	Prior to start and during construction (Construction)	School Design Guide. Construction and demolition waste shall be recycled to the maximum extent feasible. LAUSD has established a minimum non-hazardous construction and demolition debris recycling requirement of 75% by weight as defined in Specification 01340, Construction & Demolition Waste Management. Guide Specifications 2004 - Section 01340, Construction & Demolition Waste Management. This section of the LAUSD Specifications includes procedures for preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in landfills. Requires the collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the C&D waste generated.	• School Design Guide. Current Version; • Specification 01340, Construction & Demolition Waste Management, July 7, 2003; • LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR; • Guide Specifications 2004. Division 1. Section 01340, Construction & Demolition Waste Management. July 7, 2003; The Collaborative for High Performance Schools. High Performance Schools Best	Construction Contractor	__________________ Signature Title: Date:

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						Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Construction Waste Management. ME2.0C.P1 and LAUSD 2014 School Design Guide.		
☒	SC-GHG-1	Water Use and Efficiency	Requires work on water pumps, valves, piping, and/or tanks	During school operation (Post-Construction)	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping, and tanks to minimize water loss.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	________________ Signature Title: Date:
☒	SC-GHG-2	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	________________ Signature Title: Date:
☒	SC-GHG-3	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	________________ Signature Title: Date:
☒	SC-GHG-4	Water Use and Efficiency	Requires work on landscape and/or irrigation system	Prior to full operation of irrigation system (Construction)	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the	LAUSD M&O	________________ Signature Title: Date:

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						Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Construction Waste Management. WE1.0C.P1 and LAUSD 2014 School Design Guide.		
☒	SC-GHG-5	Energy Efficiency	Building construction	Prior to occupancy (Planning & Construction)	LAUSD shall ensure that the time dependent valued energy of the proposed project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are in force at the time the project is submitted to the Division of the State Architect.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Energy Efficiency. EE1.0C.P1 and LAUSD 2014 School Design Guide.	Design Team; Construction Contractor; LAUSD FSD; M&O	Signature Title: Date:
HAZARDS and HAZARDOUS MATERIALS								
☐	SC-HAZ-1	Electro-magnetic fields	Place new classrooms or outdoor play areas near power lines or cell towers	Prior to project approval	OEHS CEQA Specification Manual, Appendix M, Criteria for School Siting in Proximity to High Voltage Power Lines. Board of Education resolutions (Effects of Non-Ionizing Radiation-2000, Wireless Telecommunication Installations-2009 and T-Mobile Cell Tower Notification and Condemnation-2009) regarding electromagnetic field (EMF) and radiofrequency exposures associated with cellular towers near schools whereby a prohibition exists regarding siting towers on school campuses.	LAUSD OEHS CEQA Specification Manual, Appendix M, Criteria for School Siting in Proximity to High Voltage Power Lines. December 2005, Revised June 2007. Board of Education resolutions: • Effects of Non-Ionizing Radiation-2000 • Wireless Telecommunication Installations-2009	LAUSD OEHS and FSD	– Signature Title: Date:

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						• T-Mobile Cell Tower Notification and Condemnation-2009		
☐	SC-HAZ-2	Pipeline Hazards	Place new classrooms or outdoor play areas near hazardous pipelines	Prior to project approval	OEHS CEQA Specification Manual, Appendix L, Pipeline Safety Hazard Analysis. This document outlines the process for evaluating safety hazards associated with underground and above-ground natural gas and hazardous liquid pipelines. The pipeline safety hazard assessment (PSHA) process determines whether potential releases of natural gas, petroleum product and crude oil from pipelines located near a school site pose a safety risk to students and staff.	LAUSD OEHS CEQA Specification Manual, Appendix L, Pipeline Safety Hazard Analysis. December 2005, Revised June 2007.	LAUSD OEHS	__________ Signature Title: Date:
☐	SC-HAZ-3	Rail Hazards	Place new classrooms or outdoor play areas within 1,500 feet of a railroad track easement	Prior to project approval	OEHS CEQA Specification Manual, Appendix K, Rail Safety Study Protocol. This document provides a guidance protocol for conducting a Rail Safety Study (RSS). It is designed to assist in evaluating whether traffic on rail lines within a 1,500-foot radius of a school site poses an unreasonable safety hazard to students and staff at the school.	LAUSD OEHS CEQA Specification Manual, Appendix K, Rail Safety Study. December 2005, Revised June 2007.	LAUSD OEHS	__________ Signature Title: Date:
☐	SC-AQ-1	Air Toxics Health Risk	Place new classrooms or outdoor play areas within ¼-mile of emission sources	Prior to project approval	OEHS CEQA Specification Manual, Appendix J, Air Toxics Health Risk Assessment (HRA). This document includes guidance on HRA protocols for permitted, nonpermitted, and mobile sources that might reasonably be anticipated to emit hazardous air emissions and result in potential long-term and short-term health impacts to student and staff at the school site.	LAUSD OEHS CEQA Specification Manual, Appendix J, Air Toxics Health Risk Assessment (HRA). December 2005, Revised June 2007.	LAUSD OEHS	__________ Signature Title: Date:
HYDROLOGY and WATER QUALITY								
☒	SC-HWQ-1	Storm Water Requirements	Land disturbance	During construction (Construction)	Stormwater Technical Manual This manual establishes design requirements and provides guidance for the cost-effective improvement of water quality in new and significantly redeveloped LAUSD school sites. These guidelines are intended to improve water quality and mitigate potential impacts to the Maximum Extent Practicable (MEP). While these guidelines meet current post-construction Standard Urban Stormwater Mitigation Plan (SUSMP) requirements. The guidelines address the mandated post-construction element of the NPDES program requirements.	Stormwater Technical Manual. Prepared for LAUSD by Geosyntec Consultants. October 2009.	Design Team; Construction Contractor	__________ Signature Title: Date:
☒	SC-HWQ-2	Storm Water Requirements	Land disturbance	During construction	Compliance Checklist for Storm Water Requirements at Construction Sites.	OEHS Compliance Checklist for Storm Water	Design Team; Construction Contractor	__________ Signature

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				(Construction)	This checklist has requirements for compliance with the General Construction Activity Permit and is used by OEHS to evaluate permit compliance. Requirements listed include a SWPPP; BMPs for minimizing storm water pollution to be specified in a SWPPP; and monitoring storm water discharges to ensure that sedimentation of downstream waters remains within regulatory limits.	Requirements at Construction Sites. No Date.		Title: Date:
☐	SC-HWQ-3	Miscellaneous Requirements	Ongoing maintenance and repair	During construction and operation (Construction & Post-Construction)	• LAUSD shall implement the following programs and procedures, as applicable: • Environmental Training Curriculum • Hazardous Waste Management Program • Medical Waste Management Program • Environmental Compliance Inspections • Safe School Inspections • Integrated Pest Management Program • Fats Oil and Grease Management Program • Solid Waste Management Program	• Environmental Training Curriculum • Hazardous Waste Management Program • Medical Waste Management Program • Environmental Compliance Inspections • Safe School Inspections • Integrated Pest Management Program • Fats Oil and Grease Management Program • Solid Waste Management Program	Design Team; Construction Contractor	Signature Title: Date:
☐	SC-HWQ-4	Flood Hazards	Site acquisition	During project design (Planning)	The analysis for new projects shall include evaluation of all possible flood hazards as determined by: (1) review of FEMA flood maps; (2) review of flood information provided by local city or county floodplain managers; (3) review of California Department of Water Resources dam safety information; and, (4) local drainage analysis by a civil engineer. The flood hazard determination shall include consideration of tsunamis and debris flow. New projects should be located outside of these hazard areas, if practical.	2004 New Construction Program EIR Mitigation Measure HWQ-5.1, adopted by the Board of Education on June 2004.	LAUSD OEHS	Signature Title: Date:
☐	SC-HWQ-5	Flood Hazards	Site acquisition	During project design	Where placing the project outside the floodplain is impractical, the school or project structure shall be protected from flooding by containment and control of flood flows (e.g., elevating lowest floors at least one foot above the expected 100-year flood level).	2004 New Construction Program EIR Mitigation Measures, adopted by the Board of Education on June 2004. HWQ-5.2	LAUSD OEHS and FSD	Signature Title: Date:

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☐	SC-HWQ-6	Tsunami Hazards	Place new classrooms or outdoor play areas within 0.62 mile of the coast, and less than 100 feet above mean sea level	Prior to classroom occupation	LAUSD shall evaluate tsunami hazards to determine if the project site is within a tsunami inundation zone as delineated by CalEMA or NOAA. If the project site is within a tsunami hazard zone LAUSD shall prepare and implement a tsunami awareness program and evacuation plan. This plan shall comply with the provisions of the LAUSD Emergency Operations Plan.	2004 New Construction Program EIR Mitigation Measure HWQ-5.3, adopted by the Board of Education on June 2004.	LAUSD OEHS; FSD	Signature Title: Date:
☐	SC-HWQ-7	Debris Flow	Place new classrooms or outdoor play areas in areas subject to potentially damaging debris flow	During project design	LAUSD shall consult with the Los Angeles County Department of Public Works, and/or local city officials, as appropriate, regarding the debris flow potential near the mouth of or in natural canyons and feasible mitigation measures shall be developed to reduce any potential risk. Potential debris flow hazards shall be reduced by one or more of the following: adequate building setbacks from natural slopes, construction of debris control facilities in upstream areas, monitoring and maintaining potential debris flow areas and basins. In addition, potential loss shall be minimized by establishing an evacuation plan, and elevated awareness and early warning of pending events.	2004 New Construction Program EIR Mitigation Measure HWQ-5.4, adopted by the Board of Education on June 2004.	LAUSD OEHS; FSD	Signature Title: Date:
NOISE								
☐	SC-N-1	Exterior Campus Noise	Exterior noise levels are or would be greater than 70 dBA L_{10} or 67 dBA L_{eq}	During project design	LAUSD shall include features such as sound walls, building configuration, and other design features in order to attenuate exterior noise levels on a school campus to less than 70 dBA L_{10} or 67 dBA L_{eq}.	2004 New Construction Program EIR Mitigation Measure N-1.1, adopted by the Board of Education on June 2004.	LAUSD OEHS; FSD; Design Team; Construction Contractor	Signature Title: Date:
☐	SC-N-2	Interior Classroom Noise	Interior classroom noise levels would be greater than 55 dBA L_{10} or 45 dBA L_{eq}	During project design	LAUSD shall analyze the acoustical environment of the site (such as traffic) and the characteristics of planned building components (such as heating, ventilation, and air conditioning [HVAC]), and design to achieve interior classroom noise levels of less than 55 dBA L_{10} or 45 dBA L_{eq} with maximum (unoccupied) reverberation times of 0.6 seconds. Noise reduction methods shall include, but are not limited to, sound walls, building and/or classroom insulation, HVAC modifications, double-paned windows, and other design features in order to achieve the noise standards. • The District should acknowledge the ANSI (American	2004 New Construction Program EIR Mitigation Measure N-1.2, adopted by the Board of Education on June 2004.	LAUSD OEHS; FSD; Design Team; Construction Contractor	Signature Title: Date:

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					National Standards Institute) S12 standard as a District goal that may presently not be achievable in all cases. • Where economically feasible, new school design should achieve classroom acoustical quality consistent with the ANSI standard and in no event exceed the current CHPS (California High Performance Schools) standard of 45 dBA. • Where economically feasible, new HVAC (Heating, Ventilating, and Air Conditioning) installations should be designed to achieve the lowest possible noise level consistent with the ANSI standard. In no event should these installations exceed the current CHPS standard of 45 dBA. • To promote the development of lower noise emitting HVAC units, the District's purchase of new units should give preference to manufacturers producing the lowest noise level at the lowest cost. • Existing HVAC units operating in excess of 50 dBA should be modified.			
☐	SC-N-3	Traffic Noise	Project-related traffic noise level exceeds local noise standards, policies, or ordinances	Prior to project approval	LAUSD shall require an acoustical analysis to identify feasible measures to reduce traffic noise increases to 3 dBA CNEL or less at the noise-sensitive land use. LAUSD shall implement recommended measures to reduce noise.	2004 New Construction Program EIR Mitigation Measure N-2.1, adopted by the Board of Education on June 2004.	LAUSD OEHS	________________ Signature Title: Date:
☐	SC-N-4	Operational Noise	Operational noise levels exceeds local noise standards, policies, or ordinances at noise-sensitive land uses	During project design and construction	LAUSD shall incorporate long-term permanent noise attenuation measures between playgrounds, stadiums, and other noise-generating facilities and noise-sensitive land uses, to reduce noise levels to meet jurisdictional standards or an increase of 3 dB or less over ambient. Operational noise attenuation measures include, but are not limited to: • buffer zones • berms • sound barriers: – buildings – masonry walls – enclosed bleacher foot wells – other site-specific project design features.	2004 New Construction Program EIR Mitigation Measure N-2.2, adopted by the Board of Education on June 2004.	LAUSD OEHS; FSD; Design Team; Construction Contractor	________________ Signature Title: Date:

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☒	SC-N-5	Construction Noise and Vibration (Annoyance)	Construction on an existing school campus	Prior to construction	LAUSD Facilities Division or its construction contractor shall consult and coordinate with the school principal or site administrator, and other nearby noise sensitive land uses prior to construction to schedule high noise or vibration producing activities to minimize disruption. Coordination between the school, nearby land uses and the construction contractor shall continue on an as-needed basis throughout the construction phase of the project to reduce school and other noise sensitive land use disruptions.	2004 New Construction Program EIR Mitigation Measure N-3.1, adopted by the Board of Education on June 2004.	LAUSD FSD; Construction Contractor; School Administrator	Signature Title: Date:
☒	SC-N-6	Vibration (Structural Damage)	Rock blasting or demolition activities	During construction	The LAUSD shall require the construction contractor to minimize blasting for all construction and demolition activities, where feasible. If demolition is necessary adjacent to residential uses or fragile structures, the LAUSD shall require the construction contractor to avoid using impact tools. Alternatives that shall be considered include mechanical methods using hydraulic crushers or deconstruction techniques.	2004 New Construction Program EIR Mitigation Measure N-5.1, adopted by the Board of Education on June 2004.	LAUSD FSD; Construction Contractor	Signature Title: Date:
☐	SC-N-7	Vibration (Structural Damage)	Pile driving or heavy vibration activities	During construction (Construction)	For projects where pile driving activities are required within 150 feet of a structure, a detailed vibration assessment shall be provided by an acoustical engineer to analyze potential impacts related to vibration to nearby structures and to determine feasible mitigation measures to eliminate potential risk of architectural damage.	none	LAUSD FSD; Construction Contractor	Signature Title: Date:
☒	SC-N-8	Vibration (Structural Damage)	Vibration intensive activities are planned within 25 feet of a historic building or structure	Prior to and during demolition and construction (Construction)	LAUSD shall meet with the construction contractor to discuss alternative methods of demolition and construction for activities within 25 feet of a historic building to reduce vibration impacts. During the preconstruction meeting, the construction contractor shall identify demolition methods not involving vibration-intensive construction equipment or activities. For example: sawing into sections that can be loaded onto trucks results in lower vibration levels than demolition by hydraulic hammers. • Prior to construction activities, the construction contractor shall inspect and report on the current foundation and structural condition of the historic building. • The construction contractor shall implement alternative methods identified in the preconstruction meeting during demolition, excavation, and construction for work done within 25 feet of the historic building. • The construction contractor shall avoid use of vibratory rollers and packers adjacent to a historic building. • During demolition the construction contractor shall not phase any	none	LAUSD FSD; Construction Contractor	Signature Title: Date:

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					ground-impacting operations near a historic building to occur at the same time as any ground impacting operation associated with demolition and construction of a new building. During demolition and construction, if any vibration levels cause cosmetic or structural damage to a historic building the District shall issue "stop-work" orders to the construction contractor immediately to prevent further damage. Work shall not restart until the building is stabilized and/or preventive measures to relieve further damage to the building are implemented.			
☒	SC-N-9	Construction Noise	Exterior construction and the use of large, heavy or noisy construction equipment	During construction (Construction)	LAUSD shall prepare a noise assessment. If site-specific review of a school construction project identifies potentially significant adverse construction noise impacts, then LAUSD shall implement all feasible measures to reduce below applicable noise ordinances. Exterior construction noise levels exceed local noise standards, policies, or ordinances at noise-sensitive receptors. LAUSD shall mandate that construction bid contracts include the measures identified in the noise assessment. Specific noise reduction measures include, but are not limited to, the following: Source Controls • Time Constraints – prohibiting work during sensitive nighttime hours • Scheduling – performing noisy work during less sensitive time periods (on operating campus: delay the loudest noise generation until class instruction at the nearest classrooms has ended; residential: only between 7:00 AM and 7:00 PM) • Equipment Restrictions – restricting the type of equipment used • Noise Restrictions – specifying stringent noise limits • Substitute Methods – using quieter methods and/or equipment • Exhaust Mufflers – ensuring equipment have quality mufflers installed • Lubrication & Maintenance – well maintained equipment is quieter • Reduced Power Operation – use only necessary size and power • Limit Equipment On-Site – only have necessary equipment on-site • Noise Compliance Monitoring – technician on site to ensure compliance • Quieter Backup Alarms – manually-adjustable or ambient sensitive types	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	LAUSD OEHS; FSD; Construction Contractor	________________ Signature Title: Date:

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					Path Controls • Noise Barriers – semi-permanent or portable wooden or concrete barriers • Noise Curtains – flexible intervening curtain systems hung from supports • Enclosures – encasing localized and stationary noise sources • Increased Distance – perform noisy activities farther away from receptors, including operation of portable equipment, storage and maintenance of equipment Receptor Controls • Window Treatments – reinforcing the building's noise reduction ability • Community Participation – open dialog to involve affected residents • Noise Complaint Process – ability to log and respond to noise complaints. Advance notice of the start of construction shall be delivered to all noise sensitive receptors adjacent to the project area. The notice shall state specifically where and when construction activities will occur, and provide contact information for filing noise complaints with the contractor and the District. In the event of noise complaints the LAUSD shall monitor noise from the construction activity to ensure that construction noise does not exceed limits specified in the noise ordinance. • Temporary Relocation – in extreme otherwise unmitigatable cases. Temporarily move residents or students to facilities away from the construction activity.			
PEDESTRIAN SAFETY								
☐	SC-PED-1	Pedestrian Safety Analysis	Increase student capacity by more than 25% or 10 classrooms	During project design	Caltrans SRTS program. LAUSD is a participant in the SRTS program administered by Caltrans and local law enforcement and transportation agencies. OEHS provides pedestrian safety evaluations as a component of traffic studies conducted for new school projects. This pedestrian safety evaluation includes a determination of whether adequate walkways and sidewalks are provided along the perimeter of, across from, and adjacent to a proposed school site and along the paths of identified	OEHS pedestrian safety evaluation	LAUSD OEHS	________________ Signature Title: Date:

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					pedestrian routes within a 0.25-mile radius of a proposed school site. The purpose of this review is to ensure that pedestrians are adequately separated from vehicular traffic.			
☐	SC-PED-2	Pedestrian Safety Analysis	Increase student capacity by more than 25% or 10 classrooms	During project design	OEHS CEQA Specification Manual, Appendix C, Traffic and Pedestrian Safety Requirements LAUSD has developed these performance guidelines to minimize potential pedestrian safety risks to students, faculty and staff, and visitors at LAUSD schools. The performance guidelines include the requirements for: student drop-off areas, vehicle access, and pedestrian routes to school. Appendix C states school traffic studies shall identify measures to ensure separation between pedestrians and vehicles along potential pedestrian routes, such as sidewalks, crosswalks, bike paths, crossing guards, pedestrian and traffic signals, stop signs, warning signs, and other pedestrian access measures.	LAUSD OEHS CEQA Specification Manual, Appendix C, Traffic and Pedestrian Safety Requirements for New Schools. December 2005, Revised June 2007.	LAUSD OEHS	Signature Title: Date:
☐	SC-PED-3	Pedestrian Safety Analysis	Increase student capacity by more than 25% or 10 classrooms	During project design	OEHS CEQA Specification Manual, Appendix D, Sidewalk Requirements for New Schools LAUSD shall coordinate with the responsible traffic jurisdiction/agency to ensure these areas are improved prior to the opening of a school. Improvements shall include, but are not limited to: • Clearly designate passenger loading areas with the use of signage, painted curbs, etc. • Install new walkway and/or sidewalk segments where none exist. • Any substandard walkway/sidewalk segments shall be improved to a minimum of eight feet wide. • Provide other alternative measures that separate foot traffic from vehicular traffic, such as distinct travel pathways or barricades.	LAUSD OEHS CEQA Specification Manual, Appendix D, Sidewalk Requirements for New Schools. December 2005, Revised June 2007.	LAUSD OEHS; Construction Contractor	Signature Title: Date:
☐	SC-PED-4	Pedestrian Safety Analysis	Increase student capacity by more than 25% or 10 classrooms	Prior to project approval	School Traffic Safety Reference Guide REF- 4492.1. This Reference Guide replaces Reference Guide 4492.0, School Traffic Safety, September 30, 2008. Updated information is provided, including new guidance on passenger loading zones and the Safety Valet Program. Guide sets forth requirements for traffic and pedestrian safety, and procedures for school principals to request assistance from OEHS, the Los Angeles Schools Police Department (LASPD), or the local police department regarding traffic and pedestrian safety. Distribution and posting of the Back to School Safety Tips flyer is required. This guide also includes procedures for traffic surveys, parking restrictions, crosswalks, advance warning signs (school zone),	LAUSD Traffic Safety Reference Guide. REF-4492.1. July 23, 2012	LAUSD OEHS	Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
					school parking signage, traffic controls, crossing guards, or for determinations on whether vehicle enforcement is required to ensure the safety of students and staff.			
☒	SC-PED-5	Safe Access to School	Construct bus loading area, student drop-off/pick-up area and/or parking	During project design (Planning)	School Design Guide. The Guide states student drop-off and pick-up, bus loading areas, and parking areas shall be separated to allow students to enter and exit the school grounds safely.	LAUSD School Design Guide. Los Angeles Unified School District. Current Version.	Design Team; Construction Contractor	____________________ Signature Title: Date:
☒	SC-T-3	Traffic Analysis	Increase student capacity by more than 25% or 10 classrooms and/or generate additional traffic or shifts traffic patterns	Prior to project approval	• Coordinate with the local City or County jurisdiction and agree on the following: • Compliance with the jurisdiction's design guidelines for access, parking, and circulation in the vicinity of the project. • Scope of analysis and methodology for the traffic and pedestrian study, including trip generation rates, trip distribution, number and location of intersections to be studied, and traffic impact thresholds. • Implementation of SRTS, traffic control and pedestrian safety devices. • Fair share contribution and/or other mitigation measures for potential traffic impacts. • Traffic and pedestrian safety impact studies shall address local traffic and congestion during morning arrival times, and before and after evening stadium events. • Traffic study will use the latest version of Institute of Transportation Engineer's (ITE) Trip Generation manual to determine trip generation rates (parent vehicles, school buses, staff/faculty vehicles, and delivery vehicles) based on the size of the school facility and the specific school type (e.g., Magnet, Charter, etc.), unless otherwise required by local jurisdiction. • Loading zones will be analyzed to determine the adequacy as pick-up and drop-off points. Recommendations will be developed in consultation with the local jurisdiction for curb loading bays or curb parking restrictions to accommodate loading needs and will control double parking and across-the-street loading.	none	LAUSD OEHS	____________________ Signature Title: Date:
☒	SC-T-4	Construction Traffic	Construction equipment to	Prior to construction	• LAUSD shall require its contractors to submit a construction worksite traffic control plan to the LADOT for review prior to	none	LAUSD FSD; Construction Contractor	____________________ Signature

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			use public roadways	(Construction)	construction. The plan will show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.			Title: Date:
POPULATION and HOUSING								
☐	SC-PH-1	Property Displacement	Residential or business property acquisition	Prior to construction	Relocation Assistance Advisory Program • LAUSD shall conform to all residential and business displacement guidelines presented in the LAUSD's Relocation Assistance Advisory Program which complies with all items identified in the California State Relocation Assistance and Real Property Acquisition Guidelines (California Code of Regulations Title 25, Division 1, Chapter 6).	LAUSD's Relocation Assistance Advisory Program	LAUSD Real Estate; Asset Management	Signature Title: Date:
PUBLIC SERVICES								
☒	SC-PS-1	Emergency Protection Services	New building, new school, change in campus traffic circulation	Prior to construction (Planning & Construction)	LAUSD shall: 1) have local fire and police jurisdictions review all construction and site plans prior to the State Fire Marshall's final approval; and 2) provide a full site plan for the local review, including all buildings, both existing and proposed, fences, drive gates, retaining walls, and other construction affecting emergency vehicle access, with unobstructed fire lanes for access indicated.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	LAUSD OEHS; FSD; Design Team; Construction Contractor	Signature Title: Date:
☐	SC-PS-2	Emergency Preparedness & Response	Practice on a standard schedule during school operation & during emergencies or disaster situations	During school operation (Post-Construction)	LAUSD shall implement emergency preparedness and response procedures in all schools as required in LAUSD References, Bulletins, Safety Notes, and Emergency Preparedness Plans.	• REF-5803.2 - Emergency Drills and Procedures, August 26, 2013 • SAF:30 - Emergency Response Protocol for LASUD Exiting Facilities, March 2, 2007 • Emergency Operations Plan, updated April 2010 • BUL-6084.0 - Use of School Facilities in an Emergency or Disaster Situation, June 11, 2013 • REF-5511.2 - Safe	LAUSD, OEHS, FSD, M&O and School Administrators	Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
						School Plans Update for 2013-2014, August 15, 2013 • BUL-5433.1 - District Emergency Response and Preparedness, March 8, 2013 • REF-5451.1 - School Site Emergency/Disaster Supplies, April 12, 2013 • REF 5741.0 - Emergency Response – Communications and Response Actions, April 23, 2012 • Other LAUSD Emergency Preparedness Plans include earthquakes, bio-terrorism, heavy rain and flooding, disturbances/demonstrations, school safety, West Nile virus precautions, procedures for reentry and cleanup of fire damaged building, disposal procedures for hazardous waste and universal waste.		
TRANSPORTATION and TRAFFIC								
☐	SC-T-1	Traffic Analysis	Increase student capacity by more than 25% or 10 classrooms and additional traffic	Prior to project approval	OEHS CEQA Specification Manual, Appendix C, Traffic and Pedestrian Safety Requirements for New Schools. Requirements identifies performance requirements for the selection and design of school sites to minimize potential pedestrian safety risks: • Site Selection	LAUSD OEHS CEQA Specification Manual, Appendix C, Traffic and Pedestrian Safety Requirements for New Schools. December 2005, Revised June 2007.	LAUSD OEHS; Design Team	__________ Signature Title: Date:

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					• Bus and Passenger Loading Areas • Vehicle Access • Pedestrian Routes to School Requirements also state school traffic studies shall identify measures to ensure separation between pedestrians and vehicles along potential pedestrian routes, such as sidewalks, crosswalks, bike paths, crossing guards, pedestrian and traffic signals, stop signs, warning signs, and other pedestrian access measures.			
☒	SC-T-2	Vehicular Access and Parking	Construction of parking, and/or vehicular or pedestrian access	During project design	School Design Guide. Vehicular access and parking shall comply with Section 2.3, Vehicular Access and Parking of the School Design Guide, January 2014 (and/or Current Version). The Design Guide contains the following regulations related to traffic: • Parking Space Requirements • General Parking Guidelines • Vehicular Access and Pedestrian Safety • Parking Structure Security	School Design Guide. Los Angeles Unified School District. Current Version.	Design Team	__________________ Signature Title: Date:
☐	SC-T-3	Traffic Analysis	Increase student capacity by more than 25% or 10 classrooms and/or generates additional traffic or shifts traffic patterns	Prior to project approval	Coordinate with the local City or County jurisdiction and agree on the following: • Compliance with the jurisdiction's design guidelines for access, parking, and circulation in the vicinity of the project. • Scope of analysis and methodology for the traffic and pedestrian study, including trip generation rates, trip distribution, number and location of intersections to be studied, and traffic impact thresholds. • Implementation of SR2S, traffic control and pedestrian safety devices. • Fair share contribution and/or other mitigation measures for potential traffic impacts. • Traffic and pedestrian safety impact studies shall address local traffic and congestion during morning arrival times, and before and after evening stadium events. • Traffic study will use the latest version of Institute of Transportation Engineer's (ITE) Trip Generation manual to determine trip generation rates (parent vehicles, school buses, staff/faculty vehicles, and delivery vehicles) based on the size of the school facility, unless otherwise required by local jurisdiction.	none	LAUSD OEHS	__________________ Signature Title: Date:

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					- Loading zones will be analyzed to determine the adequacy as pick-up and drop-off points. Recommendations will be developed in consultation with the local jurisdiction for curb loading bays or curb parking restrictions to accommodate loading needs and will control double parking and across-the-street loading.			
☒	SC-T-4	Construction Traffic	Large construction equipment required to use public roadways	Prior to construction (Construction)	LAUSD shall require its contractors to submit a construction worksite traffic control plan to the local City or County jurisdiction for review prior to construction. The plan shall show the location of any haul routes, hours of operation, protective devices, warning signs, and access to abutting properties. LAUSD shall encourage its contractor to limit construction-related trucks to off-peak commute periods. As required by Caltrans, applicable transportation related safety measures shall be implemented during construction.	none	LAUSD FSD; Construction Contractor	Signature Title: Date:
☐	SC-AQ-5	Traffic Reduction	Increase student capacity by more than 25% or 10 classrooms and additional traffic	During school operation	LAUSD shall encourage ride-sharing programs for students and teachers as well as maintain fleet vehicles such as school buses, maintenance vehicles, and other service fleet vehicles in good condition in order to prevent significant increases in air pollutant emissions created by operation of a new school.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	LAUSD OEHS; FSD; School Administrators	Signature Title: Date:
TRIBAL CULTURAL RESOURCES								
☒	SC-TCR-1	Native American Resource	Evidence of Native American resources is uncovered	During grading, excavation, or other ground-disturbing activities (Construction)	All work shall stop within a 30-foot radius of the discovery. Work shall not continue until the discovery has been evaluated by a qualified archaeologist and the local Native American representative has been contacted and consulted to assist in the accurate recordation and recovery of the resources.	none	Construction Contractor; Qualified Archaeologist; Local Native American Representative	Signature Title: Date:
UTILITIES and SERVICE SYSTEMS								
☒	SC-USS-1	Solid Waste (construction)	Generate construction and/or demolition debris	Prior to start and during construction (Construction)	School Design Guide. Construction and demolition waste shall be recycled to the maximum extent feasible. LAUSD has established a minimum non-hazardous construction and demolition debris recycling requirement of 75% by weight as defined in Specification 01340, Construction & Demolition Waste Management. Guide Specifications 2004 - Section 01340, Construction & Demolition Waste Management. This section of the LAUSD Specifications includes procedures for	- School Design Guide. Current Version; - Specification 01340, Construction & Demolition Waste Management, July 7, 2003; - LAUSD Best Management Practices,	Construction Contractor	Signature Title: Date:

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					preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and re-use and to minimize disposal in landfills. Requires the collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the C&D waste generated.	adopted by the Board of Education on June 2004 as part of the 2004 Program EIR; • The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Construction Waste Management. ME2.0C.P1 and LAUSD 2014 School Design Guide.		
☒	SC-USS-2	Water Supply	Excavation near water lines	During construction	LAUSD shall coordinate with the City of Los Angeles Department of Water and Power or other appropriate jurisdiction and department prior to the relocation or upgrade of any water facilities to reduce the potential for disruptions in service.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR.	LAUSD FSD; M&O	________________ Signature Title: Date:
☐	SC-USS-3	Solid Waste (operation)	New school or new school construction on existing campus	During operation	Provide easily accessible area serving the entire school that are dedicated to the collection and storage of materials for recycling including (at a minimum) paper, cardboard, glass, plastics, metals and landscaping waste. There shall be at least one centralized collection point (loading dock), and ability for separation of recyclables where waste is disposed of for classrooms and common areas such as cafeteria's, gyms or multi-purpose rooms.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with	LAUSD OEHS; M&O	________________ Signature Title: Date:

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
						2011 Amendments. Prerequisite. Storage and Collection of Recyclables. ME1.0.P2		
☒	SC-GHG-1	Water Use and Efficiency	Work on water pumps, valves, piping, and/or tanks	During school operation (Post-Construction)	During school operation, LAUSD shall perform regular preventative maintenance on pumps, valves, piping, and tanks to minimize water loss.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	Signature Title: Date:
☒	SC-GHG-2	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall utilize automatic sprinklers set to irrigate landscaping during the early morning hours to reduce water loss from evaporation.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	Signature Title: Date:
☒	SC-GHG-3	Water Use and Efficiency	Requires work on landscape irrigation system	Prior to full operation of irrigation system (Post-Construction)	LAUSD shall reset automatic sprinkler timers to water less during cooler months and rainy season.	LAUSD Best Management Practices, adopted by the Board of Education on June 2004 as part of the 2004 Program EIR	LAUSD M&O	Signature Title: Date:
☒	SC-GHG-4	Water Use and Efficiency	Work on landscape and/or irrigation system.	Prior to full operation of irrigation system (Construction)	LAUSD shall develop a water budget for landscape (both non-recreational and recreational) and ornamental water use to conform to the local water efficient landscape ordinance. If no local ordinance is applicable, then use the landscape and ornamental budget outlined by the California Department of Water Resources.	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual, Vol. III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Ed. on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Construction Waste Management. WE1.0C.P1 and LAUSD 2014 School Design Guide.	LAUSD M&O	Signature Title: Date:
☐	SC-GHG-5	Energy Efficiency	Building construction	Prior to occupancy (Planning &	LAUSD shall ensure that the time dependent valued energy of the proposed project design is at least 10 percent, with a goal of 20 percent less than a standard design that is in minimum compliance with the California Title 24, Part 6 energy efficiency standards that are	The Collaborative for High Performance Schools. High Performance Schools Best Practices Manual,	Design Team; LAUSD FSD; M&O	

Standard Conditions of Approval

Apply if Checked	Reference #	Topic	Trigger for Compliance	Implementation Phase	Standard Conditions	Original Source	Responsible Implementing Party	Signature of Responsible Party (OEHS)
				Construction)	in force at the time the project is submitted to the Division of the State Architect.	Volume III-– Criteria. Version 1.0, November 1, 2001. Adopted by the Board of Education on October 28, 2003. Updated 2009 CHPS Scorecard with 2011 Amendments. Prerequisite. Energy Efficiency. EE1.0C.P1 and LAUSD 2014 School Design Guide.		____________________ Signature Title: Date:

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Appendix F.

Mitigation Monitoring and Reporting Program

February 2018 | DRAFT Mitigation Monitoring and Reporting Program
State Clearinghouse No. 2017111008

SHERMAN OAKS CENTER FOR ENRICHED STUDIES COMPREHENSIVE MODERNIZATION

Los Angeles Unified School District

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Table of Contents

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1. Introduction

1.1 PURPOSE

This Mitigation Monitoring and Reporting Program (MMRP) has been developed to provide a vehicle by which to implement and monitor compliance with the Los Angeles Unified School District's (LAUSD's) CEQA required mitigation measures identified in the SOCES Comprehensive Modernization Project (Project) Environmental Impact Report (EIR) (State Clearinghouse No. 2017111008).

This MMRP has been prepared in conformance with Section 21081.6 of the Public Resources Code (PRC) and LAUSD practice. Section 21081.6 states:

> (a) When making findings required by paragraph (1) of subdivision (a) of Section 21081 or when adopting a mitigated negative declaration pursuant to paragraph (2) of subdivision (c) of Section 21080, the following requirements shall apply:
>
> (1) The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead or responsible agency, prepare and submit a proposed reporting or monitoring program.

The Project and all other LAUSD School Upgrade Program-related projects are required to comply with design standards, conditions and sustainable building practices. Certain standards assist in reducing environmental impacts, such as CALGreen[1] and the LAUSD Standard Conditions of Approval, as applicable by incorporating features and conditions into the project definition and design.

Collaborative for High Performance Schools (CHPS).[2] The Project would include CHPS criteria points under seven categories: Integration (II), Indoor Environmental Quality (EQ), Energy (EE), Water (WE), Site (SS), Materials and Waste Management (MW), and Operations and Metrics (OM). Under the current 2014 CA-CHPS criteria, the project would earn at least 250 points—110 prerequisite criteria points and 140 criteria

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[1] California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations.

[2] The Board of Education's October 2003 Resolution on Sustainability and Design of High Performance Schools, directs staff to continue its efforts to ensure that every new school and modernization project in the District, from the beginning of the design process, incorporate CHPS (Collaborative for High Performance Schools) criteria to the extent possible.

credit points. The optional credit points would be determined during later site and architectural design phases, but all prerequisites are required.

Project Design Features. Project Design Features (PDFs) are environmental protection features that modify a physical element of a site-specific project and are depicted in a site plan or documented in the project design plans. PDFs may be incorporated into a project design or description in order to offset or avoid a potential environmental impact and do not require more than adhering to a site plan or project design. Unlike mitigation measures, PDFs are not special actions that need to be specifically defined or analyzed for effectiveness in reducing potential impacts.

Standard Conditions of Approval. LAUSD Standard Conditions of Approval are uniformly applied development standards, that were compiled from established LAUSD standards, guidelines, specifications, practices, plans, policies, and programs, as well as from the District's typically applied mitigation measures. The Standard Conditions were adopted by the LAUSD Board of Education in November 2015.[3] The Standard Conditions of Approval have been updated since the adoption of the 2015 version in order to incorporate and reflect changes in the recent laws, regulations, and the Los Angeles Unified School District's standard policies, practices, and specifications. The conditions are divided into the 19 LAUSD CEQA environmental topics (Appendix G of the CEQA Guidelines).[4] For each Standard Condition of Approval compliance is triggered by factors such as the project type, existing conditions, and type of environmental impact.

Mitigation Measures. If after incorporation and implementation of Federal, State, and local regulations, CHPS prerequisite criteria, Project Design Features, and Standard Conditions of Approval there are still significant environmental impacts, then feasible and project-specific mitigation measures are required to reduce impacts to less than significant levels. Mitigation under CEQA Guidelines Section 15370 includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- Compensating for the impact by replacing or providing substitute resources or environments.

Mitigation measures must further reduce significant environmental impacts above and beyond compliance with federal, state, and local laws and regulations, Project Design Features, and Standard Conditions of Approval.

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[3] LAUSD. 2015. Program EIR for the School Upgrade Program. Available at: http://achieve.lausd.net/ceqa. (see Program EIR Table 4-1 and Appendix F).

1.2 PROJECT LOCATION

The 21.5-acre SOCES campus is located at 18605 Erwin Street in the Community of Reseda, City of Los Angeles, 91335 APN 2127-012-900), in the West San Fernando Valley. The campus is on the southeast corner of Victory Boulevard and Yolanda Avenue. Regional access to the site is from the Ventura Freeway (U.S. Route 101) to Reseda Boulevard.

1.3 SUMMARY PROJECT DESCRIPTION

The Project encompasses most of the SOCES campus and consists of the comprehensive modernization of the campus, including demolition, construction, and renovation activities. The Project includes demolition and removal of 7 relocatable buildings and 5 permanent buildings: Physical Education Building (Building 24), Instrumental Music Building (Building 5), Industrial Arts Building #2 (Building 7), Classroom Building B (Building 9), and Classroom Building C (Building 10); new construction of a Science, Art, & Technology Classroom Complex, Elementary Classroom Complex, and Gymnasium Building; and remodel and modernization of the Auditorium Building (Building 1), Administrative Building (Building 13), Counseling Building (Building 12), Sanitary Building D (Building 14), Classroom Building K (Building 20), and Classroom Building L (Building 21). Other improvements include replacement of the lunch shelter and campus-wide infrastructure, including domestic water, fire, irrigation, gas, sewer, low voltage (e.g., fire, telephone, data), electrical, storm drainage, Americans with Disabilities Act (ADA) compliance, landscape, hardscape, and exterior paint.

1.4 ENVIRONMENTAL IMPACTS

1.4.1 No Impact and Less Than Significant Impact

The following environmental resource areas were identified as no impact or less than significant in the EIR.

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Pedestrian Safety

- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Tribal Cultural Resources
- Utilities and Service Systems

1.4.2 Significant and Unavoidable Impact

The EIR found that the Project would result in one potentially significant impact: Cultural Resources. Table 1 lists the mitigation measures that were incorporated into the proposed project. To reduce impacts associated with demolition of historic buildings, implementation of Mitigation Measure MM-CUL-1 would provide information to the public through a permanent interpretive exhibit. However, even with the incorporation of LAUSD Standard Conditions of Approval and Mitigation Measure MM- CUL-1, impacts to the historical resources at the school would be significant and unavoidable.

2. Monitoring and Reporting Requirements

2.1 INTRODUCTION

CEQA requires adoption of a reporting or monitoring program for the conditions of project approval that are necessary to mitigate, reduce or avoid significant effects on the environment.[5]

The purpose of the MMRP is to ensure the effective implementation of the measures for the Project. In addition, it provides a means for identifying corrective actions, if necessary, before irreversible environmental damage occurs. As the Lead Agency, LAUSD is responsible for review and approval of the Project and adoption of the MMRP.

The program requirements outlined in Table 1 includes:

- Mitigation Measures
- Responsibility for Implementation
- Implementation Phase (i.e., pre-construction, construction, prior to occupancy, post-occupancy)
- Responsibility for Monitoring
- Completion date and initials of monitoring party.

2.2 CATEGORIZED MATRIX

Project-specific mitigation measures have been categorized Table 1. The table serves as the basis for scheduling the implementation of, and compliance with, mitigation measures.

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[5] PCR Section 21081.6

2. Monitoring and Reporting Requirements

Table 1. Mitigation Monitoring and Reporting Program

	Mitigation Measures[6]	Responsibility for Implementation	Implementation Phase	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
CULTURAL RESOURCES					
MM-CUL-1.	To reduce the impact of the removal of character-defining buildings and disruption of the Sherman Oaks Center for Enriched Studies (SOCES) campus, LAUSD shall install an interpretive exhibit at the school to provide historical and architectural information about the campus. The exhibit shall permit staff, students, and the public to understand what was historically on the campus before the comprehensive modernization Project. The District shall prepare an interpretive exhibit for the SOCES campus as part of the Project. The interpretive exhibit about the history of SOCES during the period of significance (1953–1955) shall be placed within a publicly accessible area on campus (such as the school library) following construction of the Project. The exhibit shall interpret the history of the campus through historical photographs, aerials, Sanborn maps, student photographs, yearbooks, newspapers, artifacts, and written narrative that visually demonstrate physical appearance, activities, and architecture styles of the school. A qualified architectural historian or historic preservation professional shall provide input and oversight to the contents, design, and installation of an interpretive exhibit.	Qualified Architectural Historian; Design Team; Construction Contractor; FSD / OEHS	During project design (Planning) and following construction of the Project.	LAUSD FSD / OEHS	
TRIBAL CULTURAL RESOURCES					
MM-TCR-1.	LAUSD shall have a Native American monitor on-call during construction-related ground disturbance activities. The Native American monitor selected by the District must have at least one or more of the following qualifications: at least one year of experience providing monitoring Native American support during similar construction activities; be designated by the Tribe as capable of providing Native American monitoring support; and/or have a combination of education and experience with Tribal cultural resources. Prior to the start of the construction, the monitor shall provide the construction crew(s) with a brief summary of the sensitivity of Tribal cultural resources, the rationale behind the need for protection of these resources, and information on the initial identification of Tribal cultural resources. Subsequently, the monitor shall remain on-site for the duration of the ground disturbances at the site to ensure the protection of any other resources that	FSD / OEHS; Native American monitor	Prior to the start of the construction	LAUSD FSD / OEHS	

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[6] Acronyms: OEHS - Office of Environmental Health and Safety; FSD - Facilities Services Division

Table 1. Mitigation Monitoring and Reporting Program

Mitigation Measures[6]	Responsibility for Implementation	Implementation Phase	Responsibility for Monitoring	Monitor (Signature Required) (Date of Compliance)
may be in the area. The Native American Monitor will complete monitoring logs on a daily basis. The logs will provide descriptions of the daily activities, including construction activities, locations, soil, and any Tribal cultural resources identified.				