3.9 HAZARDS AND HAZARDOUS MATERIALS

This section of the Draft EIR provides an analysis on potential impacts related to hazardous materials.

3.9-1 Regulatory Framework

Federal, state, regional, and local regulations concerning hazards and hazardous materials are described in the following sections.

3.9-1.1 Federal Regulations

Resource Conservation and Recovery Act (42 United States Code Section 6901 et seq.)

The Resource Conservation and Recovery Act (RCRA) regulates hazardous wastes from the time the waste is generated through its management, storage, transport, and treatment until its final disposal. The United States Environmental Protection Agency (USEPA) authorized the California Department of Toxic Substances Control (DTSC) to administer the RCRA in California.

Comprehensive Environmental Response, Compensation, and Liability Act (42 United States Code Section 9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was designed to clean up abandoned hazardous waste sites that may endanger public health or the environment. The law authorized the USEPA to identify parties responsible for contamination of sites and compel the parties to clean up the sites. Where responsible parties cannot be found, the USEPA is authorized to perform the cleanup using a special trust fund. This law outlines the potential liability related to the cleanup of hazardous substances, available defenses to such liability, appropriate inquiry into site status under Superfund, and statutory definitions of hazardous substances and petroleum products.

Clean Air Act (42 United States Code Section 7401 et seq.)

The Clean Air Act protects the public from exposure to airborne contaminants that are known to be hazardous to human health. Under the Clean Air Act, the USEPA established National Emissions Standards for Hazardous Air Pollutants, which are emissions standards for air pollutants, including asbestos.

Clean Water Act (33 United States Code Section 1342[p])

The Clean Water Act – National Pollutant Discharge Elimination System (Section 402[p]) regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.

Toxic Substances Control Act (15 United States Code Section 2601 et seq.)

The Toxic Substances Control Act addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCB), asbestos containing materials (ACMs), and lead based paint (LBP). Certain substances are generally excluded from the act including, but not limited to, food, drugs, cosmetics, and pesticides. The Toxic Substances Control Act gives the USEPA the authority to require reporting, recordkeeping, testing, and restrictions relating to chemical substances and/or mixtures.

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act (OSHA) requires training handlers of hazardous materials, notifying employees who work in the vicinity of hazardous materials, acquiring material safety data

sheets that describe the proper use of hazardous materials, and training employees to remediate any accidental releases of hazardous material. It also regulates lead and asbestos as it related to employee safety to reduce potential exposure. Additionally, it requires contractors conducting LBP and ACM surveys and removal to be certified by the California OSHA.

Federal Insecticide, Fungicide, and Rodenticide Act (7 United States Code Section 136 and 40 Code of Federal Regulations Parts 152.1 to 171)

The Federal Insecticide, Fungicide, and Rodenticide Act regulates the distribution, sale, and use of pesticides. All pesticides distributed or sold in the United States must be registered with the USEPA. When used according to specifications, the pesticide must demonstrate that it "…will not generally cause unreasonable adverse impacts on the environment.''

Hazardous Materials Transportation Act (49 United States Code Section 5101 et seq. and 49 Code of Federal Regulations Parts 101, 106, 107, and 171-180)

The Hazardous Materials Transportation Act regulates the transportation of hazardous materials. The objective is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous materials in commerce, by improving the regulatory and enforcement authority of the Secretary of Transportation.

3.9-1.2 State and Regional Regulations

At the State level, California has developed hazardous waste regulations that are similar to the federal laws, but that are more stringent in their application. The basic law established in California, similar to RCRA, is the Hazardous Waste Control Law. More detailed information concerning the implementation of these requirements is given in Title 22 of California Code of Regulations (CCR), Chapter 30. The Hazardous Waste Control Law empowers the California DTSC, a division of the California Environmental Protection Agency (Cal EPA) (formerly part of the Department of Health Services), to administer the State's hazardous waste program and implement the federal program in California. This law includes underground storage tank (UST) regulations.

Other relevant state laws are described in the following sections.

Department of Toxic Substances Control

Authority for the statewide administration and enforcement of RCRA rests with the DTSC of CalEPA. While the DTSC has primary state responsibility in regulating the generation, storage, and disposal of hazardous materials, DTSC may further delegate enforcement authority to local jurisdictions. In addition, the DTSC is responsible for and/or provides oversight for contamination cleanup and administers statewide hazardous waste reduction programs. DTSC operates programs to (1) deal with the aftermath of improper hazardous waste management by overseeing site cleanups; (2) prevent releases of hazardous waste by ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly; and (3) evaluate soil, water, and air samples taken at sites.

California Code of Regulations, Title 27, Division 2, Chapter 3, Subchapter 4, Gas Monitoring and Control at Active and Closed Disposal Sites

The regulations within Article 6 set forth the performance standards and the minimum substantive requirements for landfill gas monitoring and control as they relate to active solid waste disposal sites and to proper closure, post-closure maintenance, and ultimate reuse of solid-waste disposal sites to ensure that public health and safety and the environment are protected from pollution caused by the disposal of solid waste.

California Code of Regulations, Title 14, Section 1724.3, Well Safety Devices for Critical Wells

This regulation governs safety devices required on "critical wells" located within 100 feet of an operating railway.

California Code of Regulations, Title 27, Division 2, Chapter 3, Subchapter 5, Closure and Postclosure Maintenance of Landfills (California Code of Regulations, Title 27, Subchapter 5)

This code provides postclosure maintenance guidelines, including requirements for an emergency response plan and site security, and regulates post-closure land use, requiring protection of public health and safety and the built environment, as well as the prevention of gas explosions. Construction on the site must maintain the integrity of the final cover, drainage, and erosion control systems, and gas monitoring and control systems. All postclosure land use within 1,000 feet of a landfill site must be approved by the local enforcement agency.

California Public Resources Code Section 21151.4

This code requires the lead agency to consult with any school district with jurisdiction over a school within a quarter mile of the project about potential impacts on the school if the project might reasonably be anticipated to emit hazardous air emissions or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance.

Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)

The Porter-Cologne Water Quality Control Act of 1969, codified as Division 7 (Water Quality) of the State Water Code, established the responsibilities and authorities of the California State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCB). According to Section 13001 of the Porter-Cologne Water Quality Control Act, these RWQCBs are to be "... the principal state agencies with primary responsibility for the coordination and control of water quality." The RWQCBs issue National Pollutant Discharge Elimination System (NPDES) permits for discharges into surface waters. Section 13050 directs each RWQCB to "...formulate and adopt water quality control plans (Basin Plans) for all areas within the region."

The RWQCBs implement the Basin Plans by issuing and enforcing waste discharge requirements (WDR) to individuals, communities, or businesses whose discharges can affect water quality. These regulations can be either WDRs for discharges onto land or NPDES permits for discharges into surface water. For surface waters that are not within federal jurisdiction (i.e., not considered waters of the U.S.), the same new procedures as mentioned in Section 2.1.1 above apply here as well (SWRCB 2019a, b).

Hazardous Materials Release Response Plans and Inventory Law (California Health and Safety Code Section 25500 et seq.)

The Hazardous Materials Release Response Plans and Inventory Act, also known as the Business Plan Act, requires businesses using hazardous materials to prepare a hazardous materials business plan that describes their facilities, inventories, emergency response plans, and training programs. Disclosure of hazardous materials inventories is required. Under the Business Plan Act, hazardous materials are defined as raw or unused materials that are part of a process or manufacturing step. They are not considered hazardous waste, although the health concerns pertaining to the release or inappropriate disposal of these materials are similar to those relating to hazardous waste. Statewide, DTSC has the primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State (California Health and Safety Code, Division 20, Chapter 6.95, Article 1).

Safe Drinking Water and Toxic Enforcement Act (Proposition 65, California Health and Safety Code, § 25249.5 et seq.)

The Safe Drinking Water and Toxic Enforcement Act, also known as Proposition 65, has been in effect since 1986 to promote clean drinking water and keep toxic substances that cause cancer or birth defects out of consumer products. Proposition 65 prohibits persons, in the course of doing business, from knowingly discharging listed chemicals known to have these toxic characteristics into any source of drinking water or onto land in which the material may come into contact with drinking water. Proposition 65 also requires businesses to warn any person exposed to chemicals known to cause cancer or reproductive toxicity. Furthermore, no persons, in the course of doing business, shall purposefully expose anybody to chemicals known to cause cancer or reproductive toxicity without clear and full disclosure (California Office of Environmental Health Hazard Assessment, 2003).

Cortese List Statute (California Government Code Section 65962.5)

California Government Code Section 65962.5 requires the DTSC to compile and maintain a list of potentially contaminated sites located throughout California. Commonly referred to as the Cortese List, the Hazardous Waste and Substances Sites List is a planning document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List. The DTSC Site Mitigation and Brownfields Reuse Program EnviroStor database provides the DTSC component of the Cortese List data by identifying the Annual Workplan (now referred to as State Response and/or Federal Superfund) and backlog sites listed under the California Health and Safety Code Section 25356 (DTSC, 2007).

California Occupational Safety and Health Act

The OSHA regulates worker safety in a manner similar to that used by federal administration. It also requires preparation of an Injury and Illness Prevention Program, which is an employee safety program that includes inspections, procedures to correct unsafe conditions, employee training, and occupational safety communication. In addition, the regulations associated with this act indirectly protect the public by requiring construction managers to post warnings signs, limit public access to construction areas, and obtain permits for work considered to present a significant risk of injury, such as excavations five feet deep or greater.

California Code of Regulations, Title 5, Division 1, Chapter 13, Subchapter 1, School Facilities Construction

This code provides general standards for the planning and construction of new educational facilities. Article 1 provides minimum standards for the facility's site location, design, and educational program requirements provided by the school district's educational goals. Article 2 provides further requirements for the facility's site selection, procedures for site acquisition for state and locally funded school districts, and standards for development of plans for the design and construction of school facilities.

Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.)

The Hazardous Waste Control Act is similar to the RCRA on the federal level in regulating the identification, generation, transportation, storage, and disposal of materials deemed hazardous by the State of California.

Asbestos (California Code of Regulations, Title 8, Section 5208, Division of Occupational Safety and Health)

This code regulates asbestos exposure for workers including demolition or salvage of structures where asbestos is present; removal or encapsulation of materials containing asbestos; construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof that contain asbestos; installation of products containing asbestos; asbestos spill/emergency cleanup; transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos on the site or location at which construction activities are performed; and excavation that may involve exposure to asbestos as a natural constituent that is not related to asbestos mining and milling activities.

Lead-Based Paint (California Code of Regulations, Title 17, Section 35033)

Because of its toxic properties, lead is regulated as a hazardous material. Lead is also regulated as a toxic air contaminant. State-certified contractors must perform inspection, testing, and removal (abatement) of lead-containing building materials in compliance with applicable health and safety and hazardous materials regulations.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Senate Bill 1082)

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs. The California Environmental Protection Agency and other state agencies set the standards for their programs, while local governments implement the standards. These local implementing agencies are called Certified Unified Program Agencies (CUPA). For each county, the CUPA regulates/oversees:

- Hazardous materials business plans
- California accidental release prevention plans or federal risk management plans
- The operation of UST and aboveground storage tanks
- Universal waste and hazardous waste generators/handlers
- On-site hazardous waste treatment
- Inspections, permitting, and enforcement
- Proposition 65 reporting
- Emergency response

Beyond the statewide regulations, CUPAs administer policies and regulations found in a number of local and regional plans (including general plans and municipal codes) that address hazardous materials and wastes. Policies and regulations are intended as guides for the appropriate use of potentially hazardous materials, the cleanup of contaminated sites, and the preparation of emergency response plans.

Los Angeles County Certified Unified Program Agency

CUPAs in Los Angeles County have adopted standards that include hazardous waste inspection and enforcement, hazardous materials disclosure, California Accidental Release Prevention, aboveground storage tanks, USTs, and hazardous waste generator registration and reporting. The local CUPAs and/or

participating agencies that implement the Unified Program elements in the project area are the Los Angeles County Public Works for the cites of Redondo Beach and Lawndale, and the City of Torrance Fire Department for the City of Torrance.

County Office of Emergency Services

The Los Angeles County Office of Emergency Services coordinates the overall county response to disasters and is responsible for alerting and notifying appropriate agencies when disaster takes place; coordinating agencies that respond; ensuring resources are available in times of disaster; developing plans and procedures for response and recovery from disasters; and providing preparedness materials for the public.

County Department of Public Health, Division of Environmental Health, Emergency Response Team

The purpose of the Emergency Preparedness and Response Unit is to ensure that the division of Environmental Health is able to protect the public from health hazards that occur after emergencies or disasters. The division of Environmental Health develops plans and establishes procedures to coordinate their response with partner agencies. They provide training and conduct drills and exercises to create a workforce that is able to manage the health effects of any emergency.

County Local Enforcement Agency for Solid Waste

The County of Los Angeles Solid Waste Management Program is the Local Enforcement Agency authorized by the California Public Resources Code to conduct inspections of any solid waste facility within its jurisdiction. In conjunction with this inspection, the Local Enforcement Agency is authorized to inspect all aspects of facility operation, including physical plant, equipment, and vehicles. The main goal of the Local Enforcement Agency is to ensure correct operation, closure of solid waste facilities, and guarantee the proper storage and transportation of solid wastes.

County of Los Angeles Health Hazardous Materials Division

The County of Los Angeles Health Hazardous Materials Division serves area residents by responding to emergencies and monitoring hazardous materials. The County of Los Angeles Health Hazardous Materials Division administers programs intended to protect public health and the environment throughout the County of Los Angeles from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. It also provides support for hazardous materials management in the County of Los Angeles through coordination of data management, business plans, and facility inspections.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) regulates asbestos through Rule 1403, Asbestos Emissions from Renovation/Demolition Activities. Rule 1403 regulates asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures and handling and cleanup procedures. Rule 1403 applies to owners and operators involved in the demolition or renovation of asbestos-containing structures, asbestos storage facilities, and waste disposal sites. SCAQMD also regulates volatile organic compounds (VOC) emissions from contaminated soil through Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil. Rule 1166 sets requirements to control the emission of VOCs from excavating, grading, handling, and treating soil contaminated with VOCs as a result of leakage from storage or transfer operations, accidental spillage, or other deposition.

Los Angeles Regional Water Quality Control Board

Surface water discharge resulting from construction dewatering activities is regulated under Los Angeles RWQCB Order No. R4-2003-0108 NPDES No. CAG994004. Effluent limits are also established by this permit.

The Los Angeles RWQCB (also referred to as RWQCB in the report) is also responsible for identifying the Section 303(d) impaired waterbodies and establishing a total maximum daily load (TMDL) for those waterbodies. The TMDLs are achieved on the local and regional levels through the NPDES construction permitting process and the implementation of regional and local watershed management plans and Standard Urban Stormwater Mitigation Plans.

The Los Angeles RWQCB implements the Section 402 program regulates construction activities and groundwater dewatering. This agency promulgates policies to protect surface waters (e.g., hydromodification), and protects surface and groundwater through implementation of the Basin Plan.

3.9-1.3 Local Regulations

City of Lawndale

The City of Lawndale General Plan's Safety Element (2015) discusses hazardous materials, their source, and transportation. The Plan states general guidelines and regulations to be followed in the event hazardous materials are released into the environment. The goal and policies related to hazardous materials are outlined in the Safety Element. These policies will ensure a community protected from the harmful effects of hazardous materials, hazardous waste, and environmental contamination.

City of Redondo Beach

The City of Redondo Beach General Plan's Environmental Hazards/Natural Hazards Element (1993c) discusses goals, objectives, and policies that relate to toxic waste and hazardous materials. Section 4.4.3 of the plan outlines the specific goal to protect the public health, safety, and welfare and the overall environment of the city through proper planning for the management, handling, and transportation of toxic and hazardous waste and materials. To help meet the goal, specific objectives and policies are outlined. The implementation of the policies will help protect the community and the environment.

City of Torrance

The City of Torrance General Plan (2010f) discusses several objectives and policies that relate to hazardous waste. The City follows federal, state, and county regulations to provide a high degree of protection for the community and the environment. Section 2.4 of the Chapter 4 Safety Element discusses the general issues associated with the storage, use, and disposal of hazardous materials because the City of Torrance has a varied industrial base. The plan also discusses the strategies and policies in place that help the City monitor hazardous materials to help reduce adverse impacts hazardous waste.

3.9-2 Methodology

This report discusses the potential for hazardous materials and wastes or other existing recognized environmental conditions (REC) to affect construction and operation of the Proposed Project and options. The analysis was based on a review of regulatory agency database searches of the resource study area (RSA), and applicable federal, state, and local regulations related to hazardous wastes and materials.

RECs are defined using the definitions for hazardous waste, material, and substances provided in the ASTM Designation E1527, "Standard Practice for Environmental Project Site Assessments: Phase I Environmental Property Assessment Process." RECs, per ASTM, are defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property due to any release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. A general search radius of a quarter- to one-mile beyond the RSA was used in identifying nearby sites registered under hazardous materials/wastes databases that could potentially impact the project. Environmental Data Resources, LLC (EDR) - generated environmental database sites were reviewed with the standard search distances within federal, state, and local environmental databases per ASTM International E1527-21. The review pertains to the objective of evaluating the potential impacts of hazardous materials/wastes that might be encountered in the soil and/or groundwater during the construction and operation of the project.

Hazardous waste has complex state and federal legal definitions. In general, a solid waste is defined as hazardous waste when it qualifies as "waste" (i.e., is no longer of use and will be disposed) and when it exhibits a hazardous waste characteristic (toxicity, ignitability, reactivity, and/or corrosivity) or when it has been specifically listed as hazardous in federal or state law or regulation. Hazardous waste is regulated by the USEPA under RCRA. Federal hazardous wastes are often referred to as RCRA wastes. California hazardous waste laws and regulations are in some cases more stringent than the federal law and, as a result, wastes may be defined as California hazardous wastes.

3.9-2.1 Resource Study Area

The RSA is the geographic extent in which this assessment was conducted. The RSA for the hazardous materials is the project footprint. The project footprint is defined as the area necessary to construct, operate, and maintain the Proposed Project. Figure 3.9-1 shows the RSAs for the Proposed Project, Trench Option, and Hawthorne Option. In addition, a general search radius of a quarter- to one-mile beyond the project footprint was used in identifying nearby sites registered under hazardous materials/wastes databases that could potentially impact the Proposed Project. Impacts to schools within a quarter-mile radius of the project footprint were also evaluated.

Figure 3.9-1. Proposed Project – Hazardous Materials Resource Study Area

Source: STV, 2022

3.9-2.2 Significance Thresholds

Based upon the thresholds of significance in Appendix G of the CEQA Guidelines, implementation of the Proposed Project would result in a significant impact related to hazardous materials if it would:

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 a quarter-mile of an existing or proposed school.

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

e. Be 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, as a result, create a significant safety hazard for people residing or working in the Project area.

f. Be located within the vicinity of a private airstrip, as a result, create a safety hazard for 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 wildfires, including where wildland fires are adjacent to urbanized areas or where residences are intermixed with wildlands.

3.9-2.3 Project Features

As described in Chapter 2, Project Description, a number of features have been incorporated into the project in order to ensure compliance with the laws, guidelines, and best practices of regulatory agencies. The following project features have been developed for hazards and hazardous materials.

PF-HHM-1. Handling, Storage, and Transport of Hazardous Materials and Wastes

Prior to the start of construction, the contractor would provide Metro with a hazardous waste and hazardous materials management plan, such as a plan defined in Title 19 CCR, or a Spill Prevention, Control, and Countermeasure Plan. The plan will be completed to Metro contractor specifications and will comply with the SWRCB Construction Clean Water Act Section 402 General Permit conditions and requirements for transport, labeling, containment, cover, and storage of hazardous materials during construction and operation. The plan will identify the responsible parties and outline procedures for hazardous waste and hazardous materials handling, storage, and transport. The excavation and transport of soils contaminated by heavy metals (e.g., lead) would be managed according to SCAQMD Rule 1466 (Control of Particulate Emissions from Soils with Toxic Air Contaminants) and SCAQMD Rule 1166 (VOC emissions from Decontamination of Soil). The plan would also prescribe best management practices (BMP) to follow to prevent hazardous material releases and for cleanup of any hazardous material releases that may occur.

Additionally, the contractor would comply with applicable federal and state regulations regarding hazardous material handling and storage practices, such as the RCRA, CERCLA, the Hazardous Materials Release Response Plans and Inventory Law, and the Hazardous Waste Control Act.

PF-HHM-2. Demolition Plans

Prior to the start of construction, the contractor would prepare demolition plans for the safe dismantling and removal of building components and debris. The demolition plans would also include plans for testing and abatement procedures for ACM, LBP, and PCB, as well as handling and disposal of treated wood waste (TWW) and universal waste in accordance with federal and state regulations, including the 1994 Federal Occupational Exposure to Asbestos Standards, SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities), Title 22 of the CCR Division 4.5 (Hazardous Waste), the U.S. Department of Housing and Urban Development Lead-Based Paint Guidelines, and Title 40 of the CFR Part 761.

PF-HHM-3. Property Acquisition Phase II Site Investigation

Consistent with Metro's standards, a Phase II site investigation would be conducted during the preliminary engineering phase on sites that would be acquired/utilized for the project to determine whether the suspected contamination had resulted in soil, groundwater, or soil vapor contamination exceeding regulatory action levels. Aerially deposited lead (ADL) testing would be included as part of the Phase II site investigation. If the Phase II site investigation concludes that the site is contaminated, remediation or corrective action (e.g., removal of contamination, in-situ treatment, capping) would be conducted prior to or during construction under the oversight of federal, state, and/or local agencies (e.g., USEPA, DTSC, RWQCB, Los Angeles County) and in full compliance with current and applicable federal and state laws and regulations. Additionally, Voluntary Cleanup Agreements may be used for parcels where remediation or long-term monitoring is necessary. Generally, REC, also known as sites of concern as identified in the Phase I Environmental Site Assessment (ESA) (DYA, 2022a; 2022b), Appendix 3.9-A, Phase I ESA - ROW and Appendix 3.9-B, Phase I ESA - Hawthorne of this Draft EIR, would be remediated by the property owner prior to acquisition of the property and construction on the site, depending on the arrangement negotiated during property acquisition.

PF-HHM-4. Soil, Soil Vapor, and Groundwater Management Plans

Prior to the start of construction, the contractor would retain a qualified environmental consultant to prepare a Soil Management Plan, Soil Reuse Management Plan, and/or a Soil, Soil Vapor, and Groundwater Management Plan. These plans would be completed to Metro's contractor specifications and submitted to Metro prior to any ground-disturbing activities for the project.

The Soil and Soil Vapor Management Plan would establish provisions for the disturbance of contaminated materials (known and undocumented). Proper management and disposition of contaminated soils and gases would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). The Soil Reuse Management Plan would establish provisions for the reuse of contaminated known or undocumented soils. Proper management and disposition of contaminated soils would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies). Contaminated soil shall be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing the project construction.

The Groundwater Management Plan would establish provisions for encountering and managing contaminated groundwater (known and undocumented). Proper disposal of contaminated groundwater would be determined in consultation with appropriate regulatory agencies and in accordance with applicable federal and/or state guidance (USEPA, DTSC, RWQCB, and other local agencies).

Where open or closed regulatory release cases are already managed by a regulatory agency (e.g., USEPA, DTSC, RWQCB) and construction involves plans to alter the use of the site and/or disturb contaminated soil and/or groundwater onsite, Metro would notify the regulatory agency of the planned land use changes prior to ground-disturbing activities at the location of the open or closed regulatory release site. The regulatory agency would determine the level of investigation and/or remediation (performance standards) necessary on a case-by-case basis. A closure or no further action determination letter from the regulatory agency would be obtained when investigation and/or remediation is complete.

PF-HHM-5. Disposal of Groundwater

If disposal of contaminated groundwater is required during construction, Metro would consult with the RWQCB, and the Project would comply with permits required by the RWQCB. The RWQCB may require an NPDES permit and/or WDR permit for dewatering and discharge activities. The County of Los Angeles Department of Public Works would be contacted prior to discharging groundwater into their sewer or stormwater systems. The groundwater discharge and disposal requirements vary by agency, location, concentration, and contaminants of concern and are therefore developed in consultation with the agencies.

PF-HHM-6. Oil and Gas Wells

Prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the project would be identified, inspected, and addressed in accordance with the California Department of Conservation, California Geologic Energy Management Division (CalGEM) standards and in coordination with the well owners. Where the alignment cannot be adjusted to avoid well casings, CalGEM and a re-abandonment specialty contractor would be contacted to determine the appropriate method of re-abandoning the well. Oil well abandonment must proceed in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and Gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. The requirements include written notification to CalGEM, protection of adjacent property, and before commencing any work to abandon any well, obtaining approval by CalGEM. Abandonment work, including sealing off oil and gas bearing units, pressure grouting, etc., must be performed by a state-licensed contractor under the regulatory oversight and approval of CalGEM. If an unknown well is encountered during Project construction, the contractor will notify Metro, California OSHA, and CalGEM, and proceed in accordance with state requirements.

3.9-3 Affected Environment / Existing Conditions

This section is based on the Phase I ESA for the Proposed Project and Options (DYA, 2022a; 2022b) and included in Appendix 3.9-A and Appendix 3.9-B. The assessment was performed to evaluate the potential impacts of hazardous substances within the RSA that might be encountered in the soil and/or groundwater during the construction and operation of the project. The ESA was prepared in general accordance with the guidelines set forth in ASTM D1527-21, with the exception that project site reconnaissance was not performed at the time this report was generated. The ESA included a search of government records to obtain a listing of properties or known incidents for hazardous waste sites from within a quarter- to one-mile radius around the RSA based on standard search distances set forth for pertaining database in ASTM D1527-21 guidelines. The minimum search distance for each database is detailed in the EDR Records search presented in Appendix 3.9-A, Phase I ESA- ROW and Appendix 3.9-B Phase I ESA – Hawthorne.

Historical records that were reviewed include aerial photographs, topographic maps, and Sanborn Maps. Environmental database records generated by EDR were obtained and reviewed to identify RECs that might impact the project activities. Additional online databases reviewed included California Water Resources Control Board GeoTracker, California DTSC EnviroStor, California Department of Conservation, CalGEM (formerly the Division of Oil, Gas and Geothermal Resources (DOGGR)), and California EPA website.

3.9-3.1 Hazardous Materials

Based on the ESA and online data review, the following hazardous materials are expected to be encountered within the Project RSA.

3.9-3.1.1 Lead-Based Paint

LBP was banned circa 1978 due to the toxicity of lead, which is particularly harmful if inhaled as dust or ingested. Lead has a range of adverse neurotoxic health effects, which put children at special risk. Some lead-containing chemicals cause cancer in animals. LBP could potentially be present on the existing bridge structures within the RSA. Lead and other heavy metals, such as chromium, may be present in yellow thermoplastic paint markings on pavement within the RSA. Graffiti on the existing bridge structures and walls along the RSA may contain LBP. Structures located within areas of proposed property acquisitions may also have the potential to contain LBP.

3.9-3.1.2 Asbestos-Containing Materials

Asbestos was formerly used in a variety of building materials due to its fire-retardant properties. Exposure to asbestos has been linked to numerous serious health problems and diseases, including asbestosis, lung cancer, and mesothelioma. The association of asbestos fiber inhalation with certain types of lung cancer led to the banning of most types of ACM circa 1980. Structures built before 1980 (as well as structures built for several years thereafter because the usage of ACMs in inventory was allowed) are therefore suspect. ACM could potentially be present in the existing bearing pads of the bridge structures within the RSA and in the brake pads of rail cars, which can be deposited in the near-surface soils within and adjacent to the existing Metro-owned right-of-way (Metro ROW). In addition, structures built prior to 1989 including, but not limited to, the existing bridges, overpasses and underpasses, interchanges, and on- and off- ramps of the I-405, and structures located within areas of proposed property acquisitions may also have the potential to contain ACM.

3.9-3.1.3 Polychlorinated Biphenyls

PCBs are chemicals that are resistant to extreme temperature and weather and have been found to be toxic and potentially carcinogenic. Older electric transformers may contain PCBs in their dielectric fluids. PCBs are considered hazardous materials because of their toxicity and shown to cause cancer in animals, along with effects on immune, reproductive, nervous, and endocrine systems, and similar effects in humans (USEPA, 2013).

3.9-3.1.4 Heavy Metals including Aerially Deposited Lead

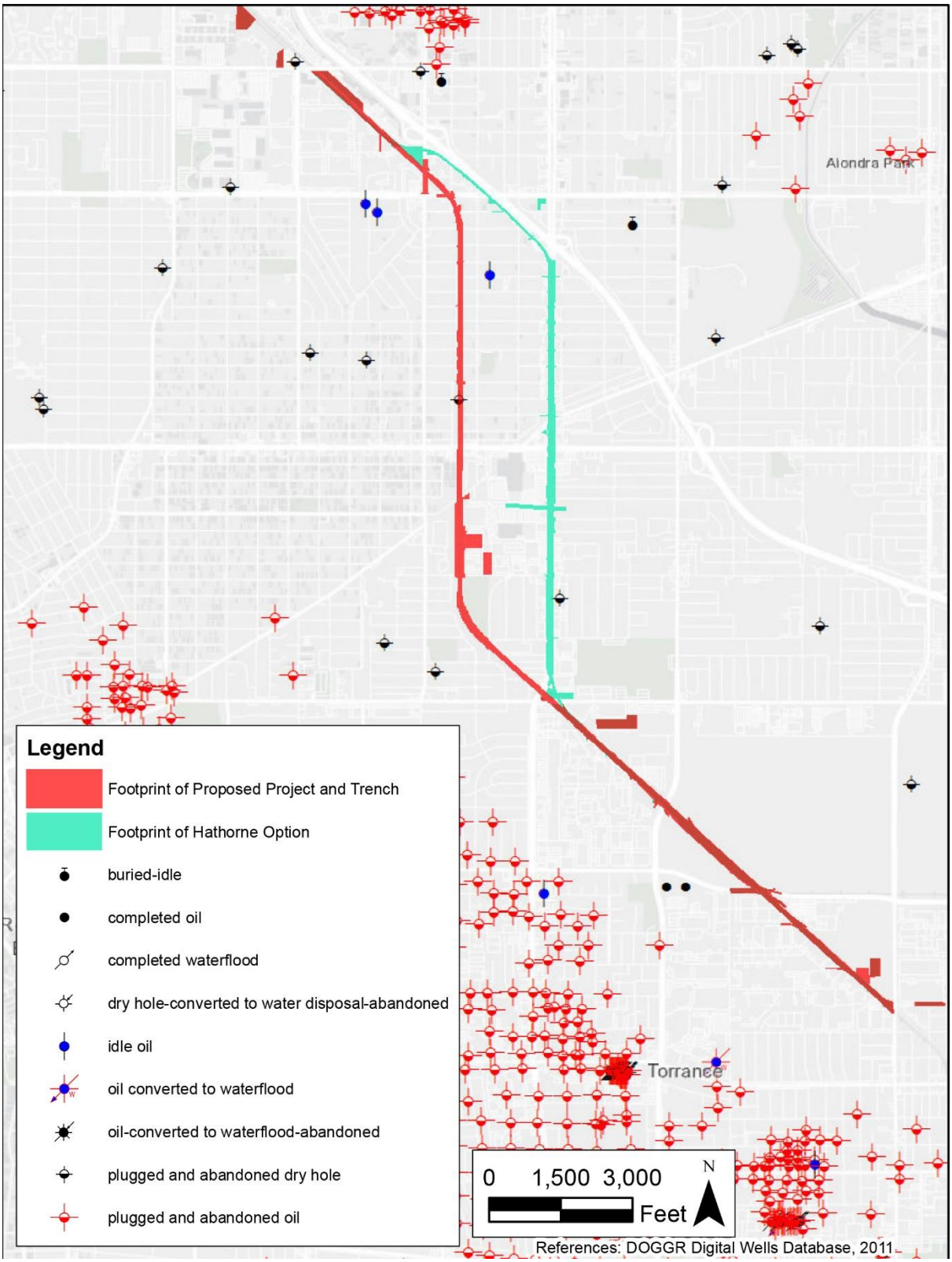
Heavy metals (particularly, arsenic, lead, and chromium, but including other metals such as cobalt, nickel, etc.) have been found to be associated with historical railroad operations in many cases. Releases can result from spills of transported materials or from railroad equipment wear. Accumulations of heavy metals are typically concentrated in the shallowest surface layers of soil or roadbed. The roads in the RSA have been in use for many years, including the period when leaded gasoline was in use (from the early 1920s until it began to be phased out in 1973). Combustion of leaded gasoline results in particulate emissions containing lead atoms, which tend to settle out of the air quite rapidly, potentially resulting in the development of elevated levels of lead in surface soils along roadways. Caltrans has documented the presence of ADL along many freeways in California. In some cases, the lead-impacted soil may qualify as hazardous waste if excavated for disposal. If left in place, it may pose a human health hazard through the exposure routes of dermal exposure or inhalation (for example, of dust). Lead exposure can lead to cardiovascular effects, increased blood pressure and incidence of hypertension, reproduction problems, and decreased kidney function.

3.9-3.1.5 Hazardous Gases

The presence of oil fields and oil refineries in the general vicinity of the RSA pose an environmental concern. Common problems associated with oil field properties include methane and hydrogen sulfide soil gas, oil seepage, contaminated soils and groundwater, leaking wells, and wells not plugged and abandoned to current standards. According to CalGEM Maps, small portions of the RSA pass through mapped Lawndale and Torrance oil field boundaries in Los Angeles County. There are no active oil wells located within the Proposed Project and Trench Option's RSA, but two active oil and gas wells are within a quarter-mile of the RSA located southeast of the intersection of Del Amo Boulevard and Madrona Avenue. There is one plugged and abandoned dry hole well within the RSA as shown in Figure 3.9-2. There are a few plugged and abandoned oil wells, oil field water wells, abandoned test borings (dry holes), and undocumented well casings near the RSA. Typically, abandoned wells are permanently sealed using cement. If a well is not sealed properly, it may provide a pathway for hydrocarbons or other contaminants to migrate to the surface.

Potential effects associated with abandoned oil/gas wells include the release of methane and/or hydrogen sulfide gas into the subsurface, posing a potential fire and explosion hazard during construction. In addition, accumulation of methane gas could displace oxygen in the breathing zone, resulting in high concentrations of hydrogen sulfide, which would be highly toxic when inhaled and create a health hazard during construction. Hydrocarbon contamination associated with oil fields can be non-point source, originating from bulk storage facilities, pipelines, sumps, and other operational features. Rails in general transport hazardous materials containing hydrocarbons and heavy metals, and the potential exists for spills and leaks to occur and contaminate shallow surface soils.

Figure 3.9-2. CalGEM Map



Source: CalGEM, 2011; Diaz Yourman & Associates, 2022

3.9-3.1.6 Petroleum Hydrocarbons

The term petroleum hydrocarbons is a general designation for a variety of compounds of various uses, origins, and hazardous characteristics. Types of petroleum hydrocarbons include gasoline and diesel (flammable fuels), crude oil, motor oil, waste oil, lubricating oil, hydraulic oil, hydrocarbon gases and others. Petroleum hydrocarbon mixtures, such as gasoline, can also contain other chemicals (such as benzene) that pose environmental concerns. Health effects associated with swallowing or inhaling hydrocarbons include lung irritation, with coughing, choking, shortness of breath, neurologic problems, irregular heartbeats, rapid heart rate, or sudden death, particularly after exertion or stress. Of the major types of hydrocarbons noted above, gasoline and diesel would be associated with petroleum pipelines, underground (or aboveground) storage tanks and leaking tanks; motor oil, waste oil, and hydraulic oil would be associated with auto repair shops and similar facilities. Releases of these materials, which are typically point source locations, are typically straightforward to identify and remediate.

Several oil and gas pipelines run within the Metro ROW including a 10-inch Shell crude oil, 8-inch ExxonMobil jet fuel, and 20-inch Chevron gas lines. Due to various reasons, the subsurface utility lines could potentially leak and contaminate the subsurface. Therefore, it is possible to encounter hydrocarbon contamination during construction that can be a potential concern, particularly if swallowed or inhaled. As noted in PF-US-1 in Section 3.11, Utilities and Service Systems, prior to ground-disturbing activities, all oil and gas pipelines within the Project ROW would be identified and marked onsite in coordination with the well owners to avoid damaging the pipelines.

3.9-3.1.7 Other Hazardous Materials or Waste

Railroad operations have historically been known to use various substances for weed control along existing or historical railroad corridors. Surface soils within the Metro ROW may contain hazardous materials from the use of weed control, including herbicides and arsenic. Acute health effects associated with exposure to such weed control substances can include stinging eyes, rashes, blisters, blindness, nausea, dizziness, diarrhea, and death. Chronic effects can include cancers, birth defects, reproductive harm, immunotoxicity, neurological and developmental toxicity, and disruption of the endocrine system. In addition, railroad ties that are in place or that may be salvaged during construction of the Proposed Project may contain semivolatile organic compounds due to creosote preservation treatment. Health related effects associated with semivolatile organic compounds include cancer, reproductive disorders, nervous system damage, and immune system disruption.

3.9-3.1.8 Recognized Environmental Conditions

Upon review of environmental database records obtained for the Proposed Project and options, the following sites were identified as potential RECs based on the history of activities of past releases at the site and their potential to impact the project (refer to Appendix 3.9-A, Phase I ESA – ROW and Appendix 3.9-B, Phase I ESA – Hawthorne for the full list of database records). While some sites may have low levels of contamination, they are still relevant to the Proposed Project and Options based on their proximity and types of construction activity that would occur on or near the site. Table 3.9-1 lists a summary of the sites, and Figure 3.9-3 through Figure 3.9-6 show their locations.

Table 3.9-1. Sites of Concern (RECs)

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
1	Voi-Shan Aerospace, Inc. (former)	4001 Inglewood Avenue, Redondo Beach	Proposed Project, Trench Option, Hawthorne Option	875 feet, north	This site is a former Voi-Shan Aerospace Fastener manufacturing facility, constructed in 1970 and occupied until 1991. The 8-acre site was redeveloped as commercial property in 1993. Depth of shallow groundwater is approximately 25 to 30 feet below ground surface (bgs) and estimated to be flowing northwest, which is generally parallel to the Proposed Project. (Waterstone, 2018.) Deep groundwater zone is encountered at 175 to 200 feet bgs and estimated to be flowing easterly, in opposite direction to the shallow zone. (Waterstone, 2019.) Site assessment began in 1986 when a leaking underground solvent storage tank was removed. Previous assessments identified that the groundwater beneath the site was contaminated with VOCs including 1,1,1-trichloroethane (TCA), trichloroethene (TCE), 1,2-dichloroethane (DCE) and tetrachloroethylene (PCE). 6,000 cubic feet of contaminated soil was removed from the site in 1993 (Envirosolve, 2008). Remediation actions including soil vapor extraction and groundwater pump-and-treat was conducted from 1992 to 1996 and again from 2011 to 2008. Groundwater contamination plume was shown to be generally following the shallow groundwater direction. (Waterstone, 2018). Onsite and offsite groundwater monitoring is ongoing to observe contamination levels (Waterstone, 2022).
2	Mobil Oil Corp (former)	3705 Inglewood Avenue, Redondo Beach	Hawthorne Option	Directly under alignment	The site is a former Mobile service station and currently occupied by a Chevron gas station. In 2003, three USTs and associated piping were removed. Groundwater at the site ranged from approximately 20 to 26 feet bgs and estimated to flow west-northwest (Kleinfelder, 2009) which is towards and parallel to the Metro ROW. There were past releases that contaminated soil and groundwater beneath the site. The existing total petroleum hydrocarbon contamination was delineated to approximately 20 feet south of the building and vertically extend to 15 feet bgs. Quarterly groundwater monitoring began in October 1990 and continued through April 2009. The contaminant concentrations found in groundwater beneath the site showed to decrease over the time. RWQCB stated that the residual hydrocarbon concentrations in the soil beneath the site do not cause direct contact concerns as all soil sample results are below their respective USEPA screening levels. RWQCB issued case closure as there is no threat to groundwater and stated monitoring wells and vapor extraction wells from within the site can be abandoned (RWQCB, 2009). The onsite wells were properly abandoned in 2010. The site would be acquired for the Hawthorne Option.

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
3	Electra Media Inc.,	4737 W 156th Street, Redondo Beach	Hawthorne Option	Directly adjacent, south	This site was listed on ERNS for an incident of release of motor oil and chemicals. There are no available records indicating the amount of spill or clean-up actions conducted. The site has been developed since the 1970s and is currently occupied by a building with paved surface for parking. A portion of the site would be acquired for the Hawthorne Option.
4	Merrell Paint Co., Inc.	15624 Inglewood Avenue, Lawndale	Proposed Project, Trench Option, Hawthorne Option	150 feet, north	This site is currently occupied by Eyedeal Interiors and used as a warehouse for flooring materials. The site was used as a paint storage facility from 1970s until the late 1990s. A UST was removed from the site in 1988. Site investigation conducted in circa 1989 indicated the presence of hydrocarbon contamination in soil and groundwater, likely released into the subsurface from a 4000-gallon UST that was used to store paint thinner (GCI, 1989). In October 1989, three groundwater monitoring wells were installed to remove any free product and monitor the contamination levels. RWQCB indicated that historical remediation at the site and apparent attenuation over the past three decades has resulted in the cleanup or abatement of the waste and there are no contaminants remaining in soil that pose a threat to the groundwater and to the public or the environment. Therefore, RWQCB issued no further requirements for onsite soil contamination and a covenant and environmental restrictions limiting the site use to commercial applications. Onsite groundwater monitoring is ongoing at the time of this assessment (RWQCB, 2022b).

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
5	Westwood Building Materials	15708 Inglewood Avenue, Lawndale	Proposed Project and Trench Option	Directly adjacent, south	This site is currently used as construction material supply warehouse with its own fueling system for onsite equipment and delivery trucks. Groundwater at the site is estimated to range from approximately 18 to 25 feet bgs with variable flow direction. Based on the recent field data, the net groundwater flow direction is easterly, and also flows to the northeast and southeast (AGE, 2021) which is towards the Project footprint. The site had release associated with the UST located near the southwest portion of the property and was previously assessed/ remediated. RWQCB issued case closure for the site on July 15, 1998, with residual soil contamination in place. In January 2004, during a product piping upgrade, soil contamination associated with hydrocarbon release was identified. The case was reopened by RWQCB on August 25, 2009. Subsequent assessments revealed that hydrocarbon contamination was detected in soil and groundwater samples and recommended the need for further assessment of the unassessed areas on site (AGE, 2018). Five groundwater monitoring wells have been installed in 2018. According to groundwater data, residual hydrocarbon contamination appeared to be decreasing. In 2022, RWQCB issued a case closure status based on the fact that the residual contamination is not an immediate threat to the drinking water source. (RWQCB, 2022c.) Following the directive from RWQCB, onsite monitoring wells were decommissioned (AGE, 2022). RWQCB has indicated that residual contamination may pose a risk to future construction/ redevelopment activities on- or adjacent to the site. (RWQCB, 2022c.)
6	Tosco-76 Station #4817	3601 Inglewood Avenue, Redondo Beach	Proposed Project and Trench Option	350 feet, south	The site is currently an active Shell gas station with registered USTs in place and formerly operated by 76 service station with two 12,000-gallon gasoline USTs. Groundwater at the site is approximately 22 feet bgs and estimated to flow northwest, parallel to the Proposed Project footprint. Historical release at the site led to soil and groundwater contamination. Subsequent remedial actions reduced the contamination levels to below maximum contaminant levels. The RWQCB issued a case closure in 2012 with residual onsite contamination in place considering it is a low threat to groundwater. (RWQCB, 2012.) Residual contamination is considered a low threat to groundwater, but a portion of the subject site would be acquired for the Proposed Project.

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
7	City of Lawndale Garage	4722 West Manhattan Beach, Lawndale	Proposed Project and Trench Option	205 feet, west	This site has been a maintenance yard and previously contained one 550-gallon and two 10,000-gallon USTs. Groundwater at the site was encountered approximately 20 feet bgs and estimated to flow northeast. Historical release at the site led to subsurface contamination. The UST system was removed from the site. Approximately 32 tons of impacted soil was excavated and disposed of off-site. Subsequent investigations determined that the contamination in onsite soils were below the acceptable levels (Ninyo & Moore, 2019). Therefore, RWQCB issued a closure to the past hydrocarbon release case at the site (RWQCB, 2019). Residual contamination is considered low threat to groundwater, but a portion of the subject site would be acquired for the Proposed Project or Trench Option.
8	Thrifty #257	16515 Hawthorne Boulevard, Lawndale	Hawthorne Option	Directly adjacent, west	This site is a former Thrifty facility, which was turned over to Atlantic Richfield in 1997 and then to Tesoro corporation in 2012. Three 10,000-gallon USTs were reportedly removed from the site in 1994 and three new USTs were installed. Assessments at the site indicated soil contamination from an unauthorized release at the site. Sampling performed post issuance of site closure in 1996 by RWQCB identified contamination concentrations in soil and groundwater (SAIC Energy, 2012). Groundwater was encountered at a depth of approximately 40 feet bgs (SAIC Energy, 2012). Several investigations were conducted at the site from 1986 through 2009 including on-site and off-site groundwater monitoring (Environmental Services, 2016). The site cleanup status on GeoTracker webpage is indicated as open for remediation at the time of assessment (GeoTracker, 2020).
9	Arco #5107	16518 Hawthorne Boulevard, Lawndale	Hawthorne Option	Directly adjacent, east	This site is an active gasoline service station operated by Arco. Records indicate that a release at the site contaminated soil and groundwater. Groundwater at the site is approximately 35 feet bgs with a varied flow towards west to northwest. Several phases of assessments have been conducted at the site since 1989 including free product removal, groundwater pump-and-treat, vapor extraction. The site cleanup status on GeoTracker webpage is indicated as open for remediation at the time of assessment (GeoTracker, 2020).

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
10	United Oil Co.,	16926 S Hawthorne Boulevard, Lawndale	Hawthorne Option	Directly adjacent, east	This site has been a gasoline retail facility since 1990s. During site development activities in 1996, contaminated soil was observed underneath the tanks. Further assessment determined that the release had contaminated onsite and off-site soil and groundwater. Groundwater was encountered at approximately 45 feet bgs and estimated to be flowing northeast. At the time of the tanks' replacement, approximately 190 cubic yards of soil were removed from the site, and limited liquid petroleum hydrocarbons were recovered. Groundwater monitoring has been conducted at the site since 1999. Additional air sparge and soil vapor extraction wells were installed as a part of remediation effort (SGI, 2006). The records indicate that the impacted soil and free product was removed from the site, and plume has remained stable, contained, and is anticipated to decrease over time. Site closure was issued based on the fact that the residual soil and groundwater contamination are unlikely to cause significant human health and environment risk (RWQCB, 2014).
11	Chevron Company Pipeline Right-of-Way (former)	18900 Hawthorne Boulevard, Torrance	Hawthorne Option	Directly under alignment	The site is currently occupied and used as a car dealer facility. The previous uses at the site resulted in the release of petroleum hydrocarbons to the subsurface contaminating onsite soils. Perched groundwater at the site was estimated to between approximately 55 and 60 feet bgs and is underlain by Bellflower Aquiclude of approximately 100 feet thick. The property south of the site was cut by about 10 feet during construction of 190 street. Groundwater beneath the perched zone was not impacted (Chevron, 1996). Majority of the impacted soil has been removed and the site have been capped; therefore, RWQCB determined that no further assessment or remediation is needed at the time (RWQCB, 1996). The site would be acquired for the Hawthorne Option.

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
12	Union Carbide Corporation	19500 Mariner Avenue, Torrance	Proposed Project	Adjacent, south	The former, approximately 100-acre, Union Carbide Corporation facility was built in 1956 for polyethylene manufacturing. The site also included an ethylene glycol blending, canning, and distribution operation; and a chemical and plastics receiving and distribution operation. The glycol production unit was demolished in 1969. Forty acres were sold for the Old Towne Mall and K-Mart complex. The remaining facility operated until 1982, when the manufacturing operations were discontinued and much of the facility was decommissioned, sold, and redeveloped. In 2008, the terminal operations were shut down except for storage of raw materials supplied to the Union Carbide Corporation latex production facility. In the past, the facility was also used for on-site disposal, and/or discharge to county sewer lines. Past activities at the site resulted in soils and groundwater contamination with the components of dripolene, VOCs, total petroleum hydrocarbons (TPH), and metals. Numerous investigations and remedial actions have been conducted since 1970s (Montgomery Watson, 2000). The site's northeastern border is adjacent to the Proposed Project. Perched groundwater at the site was encountered at approximately 55 feet bgs and the deeper aquifer at 90 feet bgs. The current, approximately 37-acre facility operating as Union Carbide Corporation Torrance Distribution Facility is a terminal and distribution center (URS, 2010). Ethylene glycol is now brought in by rail or truck and distribution continues. The facility consists of old and new bulk terminals, a distilled spirits plant, a concrete-lined stormwater detention basin, and the heil separator. The facility also includes bulk storage, transfer, and blending of chemicals. The site has 56 ASTs, as well as 8 USTs that are currently used to store chemical products on site. One aboveground storage tank located near the eastern boundary of the facility is used to store wastewater collected from the heil separator. DTSC has indicated that portion of the subject site (Areas 1 and 2 as designated in remedial action plan), adjacent to the Metro ROW were impacted with dense nonaqueous phase liquids and benzene in perched groundwater and are currently under institution controls and ongoing remediation (DTSC 2022a; 2022b).

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
13	North Posse Site	3041 Del Amo Boulevard, Torrance	Proposed Project	Adjacent, west	This site consists of approximately 31 acres of predominantly undeveloped land with horse stables located on approximately 1.2 acres in the southeastern portion of the property. Historically, the site was an out-parcel ancillary to the Torrance Oil refinery located across the site at 3700 W 190th Street. The property was used as a borrow pit for construction of berms at the refinery site. Oil pipelines were observed on and adjacent to the property. (SCS Engineers, 2022). No oil production/processing activities were conducted on the site; however, the northwest portion of the site was used for disposal of refinery wastes between the 1940s and 1960s. Several investigations at the site confirmed that this disposal area has been contaminated with TPH, semi-volatile organic compound (SVOCs), VOCs, ACM, and metals above regulatory screening levels. It is also indicated that the soil vapor has elevated concentrations of methane and VOCs, possibly from the groundwater contamination from potential off-site source located northeasterly to the site (SCS Engineers, 2018). Groundwater at the site is approximately 70 feet bgs and flows generally in a southwesterly direction. The site has numerous groundwater monitoring wells associated with the refinery present on the property primarily around the perimeter (SCS Engineers, 2018). In 2022, a workplan was prepared by SCS Engineers for additional assessment at the site (SCS Engineers, 2022). The facility is part of the oil refinery clean up and abatement program under the remedial action plan under the California Land Reuse and Revitalization Act.
14	Former Amp-Matrix Facility	355-455 Maple Avenue, Torrance	Proposed Project	600 feet south	This site was formerly owned by Matrix Science Corporation, which operated a manufacturing facility to produce electronic connectors between 1968 and 1988 on six contiguous parcels. The site was acquired by AMP, Inc., in 1998 and continued similar operations until the facility was bought by the current user, Tyco Electronics Corporation. Past site use had resulted in subsurface contamination at the site. Groundwater at the site is estimated to be at approximately 105 feet bgs and flowing south-southeast. Several phases of subsurface investigation and remedial actions related to VOCs have been conducted at the site, including contaminated soil removal, soil vapor extraction, and on-site and off-site groundwater monitoring. The offsite groundwater monitoring wells were installed as part of an interim remedial action plan and monitoring of those wells is ongoing under the oversight of RWQCB (Clark, 2020).

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
15	Torrance/Dowell Schlumberger, Inc.	305 Crenshaw Boulevard, Torrance	Proposed Project	Adjacent, north	The name on the EnviroStor website indicates that this site is owned by Hydro Chem Industrial Services, Inc. It is noted that the facility has never been regulated as a treatment, storage, and disposal facility and so was administratively closed. (DTSC, 2020). Due to insufficient data, it is unclear whether the site has been subject to any release of hazardous materials in the past. However, the site location shown on GeoTracker corresponds to the former DOW Chemical Company located at 301 Crenshaw Boulevard. Based on the review of historical aerial photographs, it appears that the location of these two sites is shown as one facility. Therefore, the findings corresponding to the 301 Crenshaw site (ID #16) applies to this location. The site cleanup status on GeoTracker webpage is indicated as open for remediation at the time of assessment (GeoTracker, 2020).
16	DOW Chemical Company	301 Crenshaw Boulevard, Torrance	Proposed Project	<50 feet northeast	The former DOW chemical facility operated on approximately 52 acres. The site was listed multiple times in the DTSC records. DOW began manufacturing polystyrenes, epoxy resins, and Styrofoam since 1953. When the facility was open, hazardous wastes were generated, stored, and managed on site. All operations at the facility were closed, however, around 2015. The improper use of hazardous material resulted in the contamination of subsurface soils and groundwater. Several assessment and corrective actions were conducted at the site since at least 2002. Americas Styrenics currently operate the site to manufacture polystyrene plastics. No online records showing the corrective actions reports were found. However, the DTSC site history summary on EnviroStor indicates that the final RCRA facility investigation report was approved in June of 2019, and the owner or operator has consented to conducting corrective action measures at the site. The site is currently being monitored for active groundwater contamination.

Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
17	PPG Industries, Inc.	465 Crenshaw Boulevard, Torrance	Proposed Project	Directly adjacent, north	This site is located at the Torrance Transit Center (TC), adjacent to the Proposed Project alignment. Between 1950 and 2000, aqueous and solvent-based paint coatings and resins were manufactured at the site. In 2000, the manufacturing facility was demolished. Groundwater at the site is approximately 85 feet bgs and flows east (RWQCB, 2008). In 1999, a 2,000-gallon UST was removed from the site. During the UST removal, TPH and VOC contamination were discovered in the soil. Subsequent assessment determined that the groundwater was also contaminated. Extensive subsurface investigations and remediation actions, including soil removal, soil vapor extraction, and groundwater pump and treat were conducted in the late 1990s. Additional investigations conducted in 2007 and 2008 indicated residual contamination in the groundwater. In 2009, soil remediation activities were conducted, and a subsequent human health risk assessment was conducted to assess potential human health risks to on-site workers and possible vapor intrusion risk due to residual contaminants. The human health risk assessment determined that the residual contaminants were not considered a risk to on-site workers or occupants; however, the risk levels exceeded residential standards. As a result, DTSC requested a land use covenant restricting the land use near the site to commercial/industrial use. DTSC issued a remedial action completion in 2010 indicating the remedial efforts were completed (Ardent, 2015). In 2015, the City of Torrance adopted a mitigated negative declaration and approved the construction and operation of the Torrance TC (City of Torrance, 2015).
18	Vought Aircraft Industries, Inc.	640 Alaska Avenue, Torrance	Proposed Project	Directly adjacent, south	This site, which is located south of the Torrance TC, currently operates as a Triumph manufacturing facility. The facility was formerly owned and operated by Northrop Grumman Corporation from 1968 until 2000 when it was purchased by Vought Aircraft Industries, Inc. The facility and was used by Northrop Grumman Corporation to manufacture aluminum skins for Boeing 737 aircrafts. The facility was a large-quantity generator of hazardous waste and maintained a RCRA-permit until it was closed in 1992. As a part of a corrective action program for the site, DTSC has identified areas of past releases (DTSC, 2005). Several investigations have been completed at the facility to assess subsurface contamination beneath the site. It is also indicated that off-site sources located northwest of the site may be a contributing source of deep soil vapor at the site. Records indicate that soil vapor extraction and monitoring are still in progress (Arcadis, 2019).

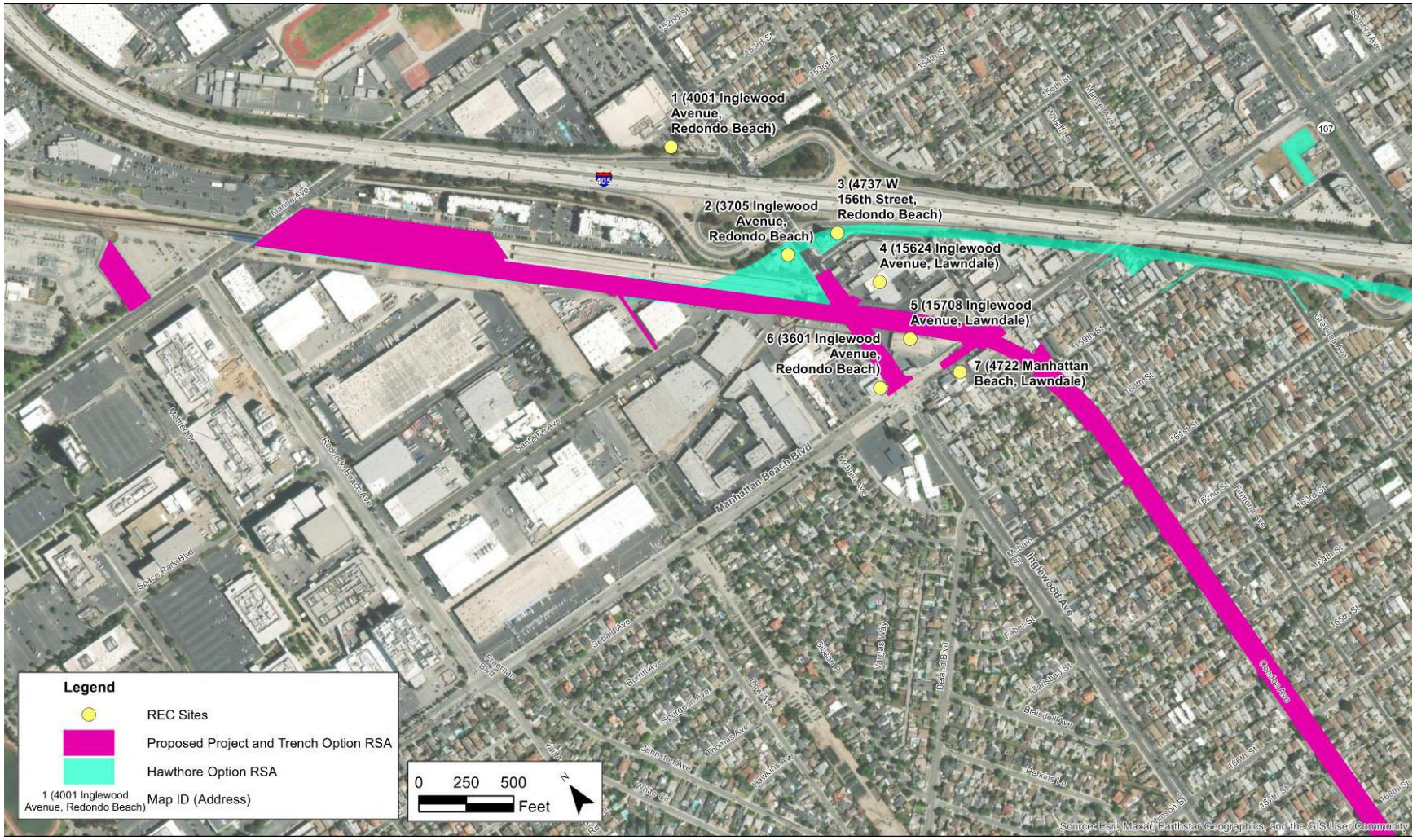
Map ID[1]	Site Name	Site Address	Potential Impact to	Distance from Project (In Feet)	Discussion
19	Exxon Mobil Oil Torrance Refinery	3700 West 190 Street, Torrance	Proposed Project	Directly adjacent, east	This site occupies approximately 700 acres on the east of the existing freight tracks bounded by 190th Street on the north, Van Ness Avenue on the east, Del Amo Boulevard on the south, and Prairie Avenue on the west. In addition, the refinery owned an approximate 29-acre triangular piece of land on the west of the Proposed Project alignment between Prairie Avenue and Del Amo Boulevard, also referred to as North Posse Site (Refer Map ID#12). The site has been used as an oil refinery since at least the 1950s. Exxon Mobil owned the site until it was transferred to Torrance Refining Company in 2016. Past activities at the site resulted in hydrocarbon contamination to the soil and groundwater beneath the site. Groundwater was encountered at approximately 70 feet bgs, and perched groundwater was reportedly present at approximately 25 and 80 feet bgs with variable flow influenced by the lower-permeability perching layers (AECOM, 2020a). The contamination appeared to have migrated off site to the southeast and southwest, from beneath the Project footprint, based on a study by others. (AECOM, 2020a). Numerous assessments and remediation actions have been conducted including removal of soil, groundwater pump-and-treat, and soil vapor extraction. In addition, several groundwater monitoring wells were installed to monitor the contamination levels. (AECOM, 2020a.) The site cleanup status on GeoTracker webpage is indicated as open for remediation at the time of assessment (GeoTracker, 2020).

Note: South of 190th Street, there is one alignment for the Proposed Project, and no options.

[1]Map ID numbers correspond to site numbers shown on Figure 3.9-3 and Figure 3.9-6

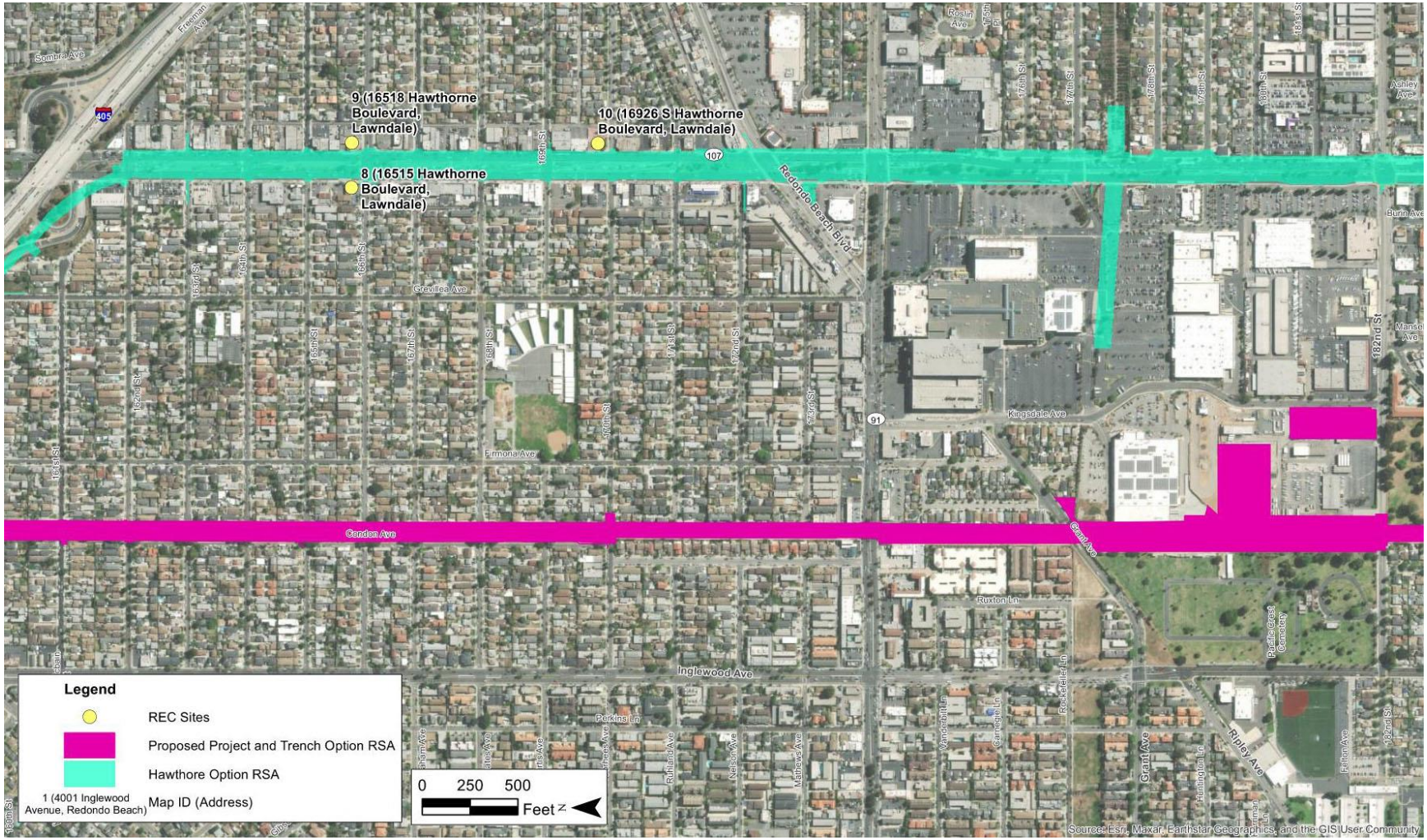
Bgs= below ground surface; TCA= 1,1,1-trichloroethane; TCE= trichloroethene (TCE); DCE= 1,2-dichloroethane; PCE= tetrachloroethylene; TPH= total petroleum hydrocarbons; SVOC= semi-volatile organic compound; VOC= Volatile Organic Compound; UST= Underground Storage Tanks; RWQCB= Regional Water Quality Control Board; USEPA= United States Environmental Protection Agency; ERNS= Emergency Response and Notification Systems

Figure 3.9-3. Sites of Concern (RECs) (Sheet 1 of 4)



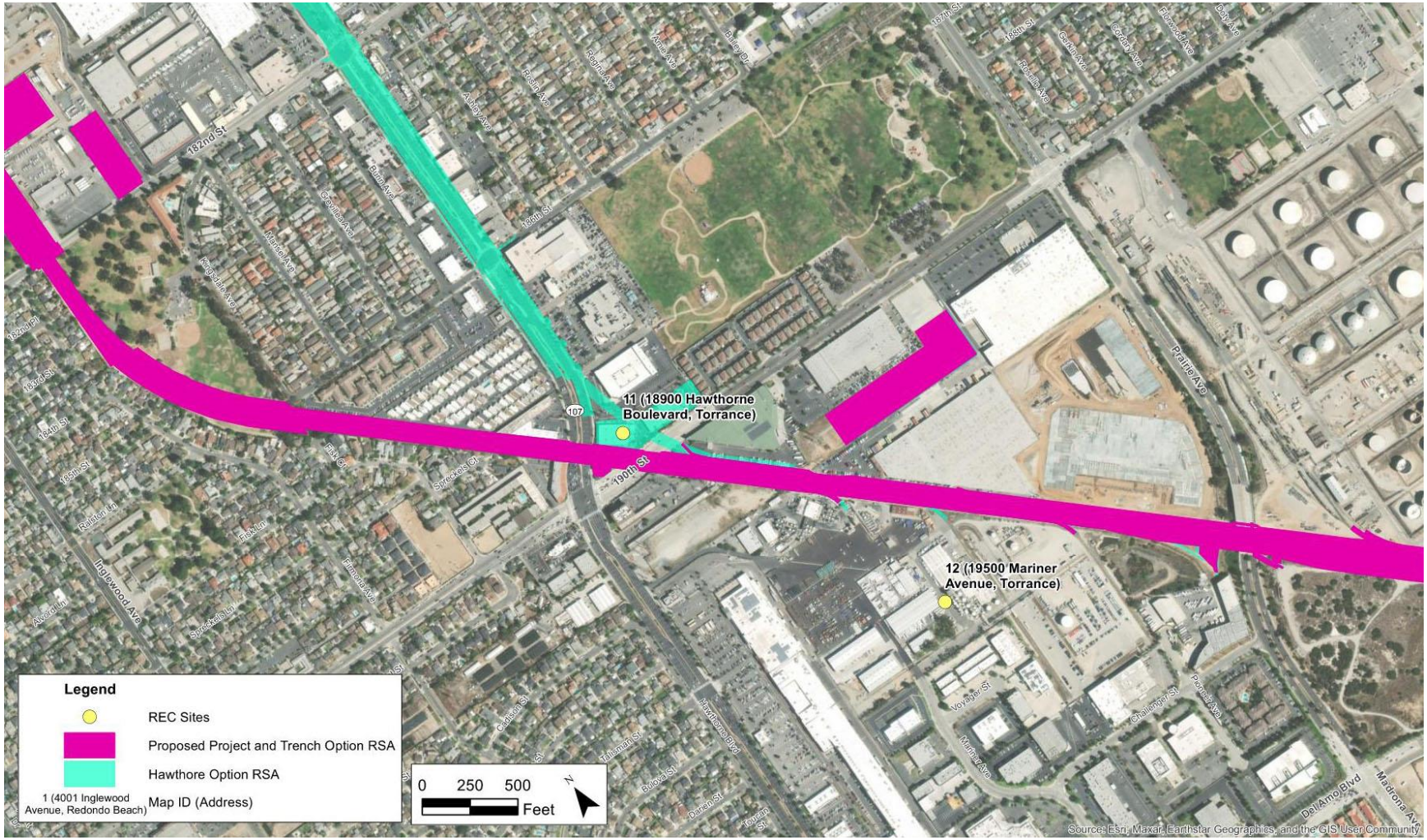
Source: Diaz Yourman & Associates, 2020a; 2020b; 2022

Figure 3.9-4. Sites of Concern (RECs) (Sheet 2 of 4)



Source: Diaz Yourman & Associates, 2020a; 2020b; 2022

Figure 3.9-5. Sites of Concern (RECs) (Sheet 3 of 4)



Source: Diaz Yourman & Associates, 2020a; 2020b; 2022

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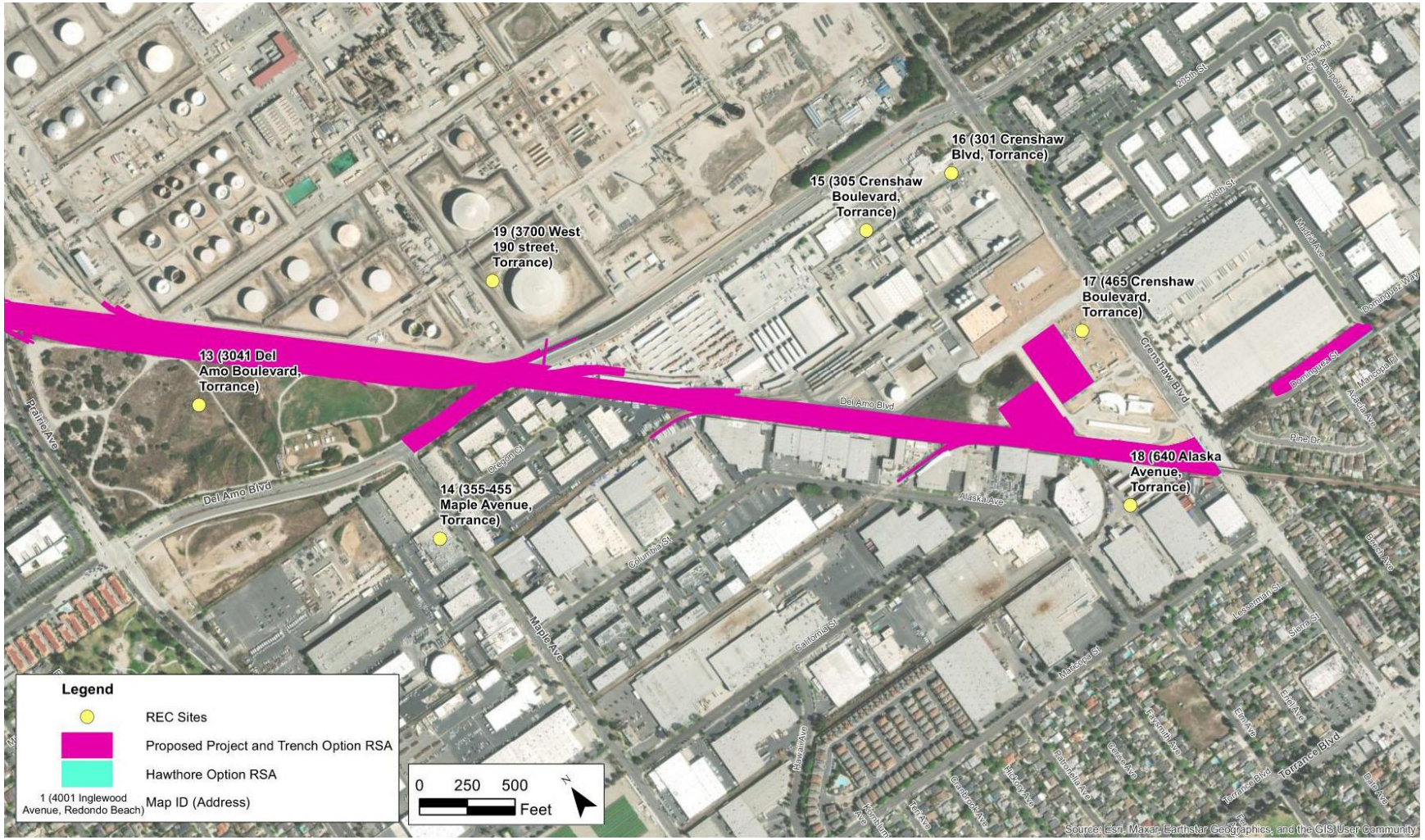
Figure 3.9-6. Sites of Concern (RECs) (Sheet 4 of 4)



Source: Diaz Yourman & Associates, 2020a; 2020b; 2022

3.9-4 Environmental Impacts

3.9-4.1 Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

3.9-4.1.1 Construction Impacts

Less Than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Proposed Project. Overall, the Proposed Project would have a **less than significant impact** during construction related to routine transport, use, or disposal of hazardous materials. The following sections describe the impacts in detail for the types of hazards.

Transport, Use, and Disposal of General Construction Materials

Less than Significant Impact. Most hazardous waste generated during construction (e.g., unused, or off-specification paint and primer, paint thinner, solvents, and vehicle and equipment maintenance-related materials) is of low risk and can be recycled. Construction equipment may inadvertently drip small quantities of hazardous materials (e.g., fuel oil and grease) and contaminate soil. PF-HHM-1 would be implemented, which would include plans detailing BMPs regarding hazardous material transport, storage, and use, as well as BMPs for cleanup should releases occur; this would reduce impacts related to transport, use, and disposal of hazardous materials.

The Proposed Project would demolish existing bridges at Grant Avenue and Del Amo Boulevard, and reconfigure freight tracks throughout the corridor. The excavation and demolition of the existing bridges would require the removal, transport, and disposal of soil and bridge materials that have potentially been contaminated by various contaminants of concern as discussed in Section 3.9-3. Some of the anticipated demolition-related hazardous waste (i.e., batteries and mercury-containing lamps and thermostats) is known as “universal waste” and can be recycled and is of low risk to the public or environment. Other anticipated hazardous waste (e.g., ACMs, LBP, PCB) is of higher risk and can pose a significant hazard to the public or environment if not managed properly. PF-HHM-2 would be implemented as a part of the project, would include demolition plans that detail the procedures for ACMs, LBP, PCB, TWW, and universal waste encountered during demolition activities in accordance with federal and state regulations. Therefore, the impact related to general construction materials would be **less than significant**.

Disposal of Contaminated Soil within the Metro ROW

Less than Significant Impact. The Proposed Project would be in an active freight ROW, and would excavate soils associated with construction, leveling, and right-of-way widening. As discussed in Section 3.9-3.1, historic railroad operations may have led to the presence of hazardous materials along the ROW including heavy metals and hydrocarbon contamination in soil, herbicides, TWW, and asbestos, which would need to be properly handled when disturbed. In addition, ADL will be likely present within unpaved soils adjacent to the Proposed Project. PF-HHM-1, Handling, Storage, and Transport of Hazardous Materials and Wastes, would include a plan detailing BMPs regarding hazardous material transport, storage, including for soils contaminated by heavy metals or with VOCs, in compliance with SCAQMD Rule 1446 and 1156. Upon removal, TWW from existing and historical railroad usage including wood railroad ties, power poles, or guard rail posts (including those previously salvaged and stored on site) in the Proposed Project footprint would be managed or disposed of in accordance with the demolition plans prepared as a part of PF-HHM-2, Demolition Plans. PF-HHM-3, would be implemented, which would require that Phase II site investigations, including testing for ADL pursuant to ASTM standards, would be performed to determine the presence of hazardous materials in soil within the

Metro ROW at the locations identified in Table 3.9-1, and corrective action would be taken in compliance with federal and state regulations.

Additionally, PF-HHM-4, Soil, Soil Vapor, and Groundwater Management Plans would be implemented as a part of the Proposed Project and would require preparation of soil and soil vapor management plans to address the possibility of encountering contaminated soil and soil vapor during Project construction. Contaminated soil would be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing the Proposed Project construction. Section 3.11, Utilities and Service Systems describes landfills, including landfills that accept contaminated soils, and their capacities when available. It is anticipated that approximately 88,113 cubic yards (CY) of soil quantity would be generated from the Proposed Project construction, 10% of which is assumed to be contaminated (i.e., approximately 8,811 CY), which would need to be disposed of at a permitted landfill per the specifications of DTSC or RWQCB or other agencies overseeing construction of the Proposed Project. As described in Section 3.11, Utilities and Service Systems, the two nearest landfills which process contaminated soils would be able to adequately process the small amount of contaminated soil anticipated to be generated by the Proposed Project. Therefore, the impact related to disposal of contaminated soils would be less than significant.

Disposal of Potentially Contaminated Groundwater

Less than Significant Impact. Based on the findings discussed in Section 3.9-3, there is a potential that the groundwater in the proposed project alignment is contaminated from offsite sources that are identified in Table 3.9-1. The Proposed Project construction would disturb potentially contaminated groundwater at locations where pile foundation for construction of elevated structures is proposed. As described in PF-HHM-4, the contractor would provide a groundwater management plan, which would establish provisions for encountering and managing contaminated groundwater. PF-HHM-5, would require consultation with RWQCB, and the Proposed Project would comply with BMPs required as part of the NPDES permit. The extracted groundwater would be discharged into storm drain system or collected onsite in drums or similar equipment and disposed accordingly, based on the contaminant concentrations. Therefore, the impact related to contaminated groundwater would be **less than significant**.

TRENCH OPTION

Less Than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Trench Option. Overall, the Trench Option would have a **less than significant impact** during construction related to routine transport, use, or disposal of hazardous materials. The following sections describe the impacts in detail for the types of hazards.

Transport, Use, and Disposal of General Construction Materials

Less than Significant Impact. The Trench Option would transport, use, and dispose of similar general construction materials as described under the Proposed Project. Similar to the Proposed Project, the Trench Option would comply with the same regulatory control measures and implement PF-HHM-1 and PF-HHM-2 to minimize impacts related to hazardous waste generated during construction. Therefore, the impact related to general construction materials would be **less than significant**.

Disposal of Contaminated Soil within the Metro ROW

Less than Significant Impact. Similar to the Proposed Project, the Trench Option would be in an active freight ROW and would excavate soils associated with construction. The construction of Trench Option would require greater disturbance to the ground for below-grade sections of the length of the

alignment. The Trench Option involves excavation quantities of approximately 340,000 CY and would require approximately 137,300 CY of fill for construction. The net quantity would result in approximately 202,600 CY of soil cuttings, of which 10% (I.e., 20,260 CY) is assumed to be contaminated. As described in Section 3.11, Utilities and Service Systems, the two nearest landfills which process contaminated soils would be able to adequately process the amount of contaminated soil anticipated to be generated by the Trench Option. While the amount of excavated contaminated soil would be greater than for the Proposed Project, the Trench Option would comply with the same regulatory control measures and implement PF-HHM-2, PF-HHM-3, and PF-HHM-4 to minimize impacts related to contaminated soil. Therefore, the impact related to contaminated soils would be **less than significant**.

Disposal of Potentially Contaminated Groundwater

Less than Significant Impact. Based on the findings discussed in Section 3.9-3, there is a potential that the groundwater in the Trench Option alignment is contaminated from offsite sources identified in Table 3.9-1. Construction for the Trench Option may require dewatering in greater quantities compared to Proposed Project, particularly at locations where the groundwater is shallow (at approximately 25 feet bgs) and the trench sections are deep. This would create conditions involving release of contaminated groundwater into the environment. The extracted groundwater would be discharged into storm drain system or collected onsite in roll-off containers or similar equipment and disposed accordingly, based on the contaminant concentrations. Similar to the Proposed Project, the Trench Option would implement PF-HHM-4 and PF-HHM-5 to minimize impacts related to contaminated groundwater. Therefore, the impact related to contaminated groundwater would be **less than significant**.

HAWTHORNE OPTION

Less Than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Hawthorne Option. Overall, the Hawthorne Option would have a **less than significant impact** during construction related to routine transport, use, or disposal of hazardous materials. The following sections describe the impacts in detail for the types of hazards.

Transport, Use, and Disposal of General Construction Materials

Less than Significant Impact. The Hawthorne Option would be entirely on an elevated structure from the Redondo Beach (Marine) Station to 190th Street. Construction of the Hawthorne Option would transport, use, and dispose of similar general construction materials as described under the Proposed Project. The construction of the elevated structure would require construction of piles that would have vertical subsurface disturbance possibly resulting in soil cuttings. In addition, construction of the elevated structure would require demolition of more existing structures compared to the Proposed Project, including the commercial properties between Inglewood Avenue and W 162nd Street.

The Hawthorne Option would result in greater risks of encountering building demolition-related waste, such as ACM, LBP, PCB. Construction of the Hawthorne Option would comply with the same regulatory control measures as described for the Proposed Project to deal with hazardous waste generated during construction, and also implement PF-HHM-1 and PF-HHM-2 to minimize impacts. Existing building structures that are to be demolished as part of the Hawthorne Option would be inspected for hazardous building materials prior to demolition. Hazardous building materials that are abated or being demolished would be properly managed by licensed contractors and disposed offsite in hazardous waste accepting landfills. Therefore, the impact related to general construction materials would be **less than significant**.

Disposal of Contaminated Soil within the Metro ROW

Less than Significant Impact. The Hawthorne Option would be located within the Metro ROW from the Redondo Beach (Marine) Station to approximately 2,000 feet south, before it leaves the Metro ROW. The impacts related to contaminated soils are similar to those discussed for the Proposed Project but are of lesser magnitude because of the shorter length of the alignment within the freight corridor. The Hawthorne Option is anticipated to excavate approximately 67,700 CY of soil, most of which would be reused onsite as fill. Approximately 450 CY of soil would need to be exported, of which 10% (i.e., 45 CY) is assumed to be contaminated. As described in Section 3.11, Utilities and Service Systems, the two nearest landfills which process contaminated soils would be able to adequately process the small amount of contaminated soil anticipated to be generated by the Hawthorne Option. Similar to the Proposed Project, the Hawthorne Option would implement PF-HHM-2, PF-HHM-3, and PF-HHM-4 to minimize impacts related to contaminated soil. Therefore, the impact related to contaminated soils would be **less than significant**.

Disposal of Potentially Contaminated Groundwater

Less than Significant Impact. Based on the findings discussed in Section 3.9-3, there is a potential that the groundwater in the Hawthorne Option alignment is contaminated from offsite sources adjacent to the RECs discussed in Table 3.9-1. Construction for Hawthorne Option construction would disturb potentially contaminated groundwater at locations where pile foundation for construction of elevated structures is proposed. Similar to the Proposed Project, the Hawthorne Option would implement PF-HHM-4 and PF-HHM-5 to minimize impacts related to contaminated groundwater. The extracted groundwater would be discharged into storm drain system or collected onsite in drums or similar equipment and disposed accordingly, based on the contaminant concentrations. Therefore, the impact related to contaminated groundwater would be **less than significant**.

3.9-4.1.2 Operational Impacts

Less than Significant Impact. Operation of the Proposed Project would involve the occasional use, storage, and disposal of hazardous materials that could include limited quantities of maintenance vehicle fuels, oils, transmission fluids, paints, solvents, cleaners, and pesticides. The light rail transit vehicles are to be electrically powered and, therefore, would not use hazardous materials, such as diesel or natural gas, as fuel. As such, the Proposed Project would not generate significant amounts of hazardous materials that would require routine transport, use, or dispose of hazardous materials or create conditions involving the release of hazardous materials into the environment. PF-HHM-1 would be implemented as a part of the project, and would include plans detailing BMPs regarding hazardous material transport, storage, and use, as well as BMPs for cleanup should releases occur; this would reduce impacts related to transport, use, and disposal of hazardous materials. Therefore, the Proposed Project would result in a **less than significant impact** related to routine transport, use, and disposal of hazardous materials during operation.

TRENCH OPTION

Less than Significant Impact. Similar to the Proposed Project, operation of the Trench Option would not generate significant amounts of hazardous materials that would require routine transport, use, or disposal of hazardous materials, or create conditions involving the release of hazardous materials into the environment. PF-HHM-1 would be implemented as part of the project. Therefore, the Trench Option would result in a **less than significant impact** related to routine transport, use, and disposal of hazardous materials during operation.

HAWTHORNE OPTION

Less than Significant Impact. Similar to the Proposed Project, operation of the Hawthorne Option would not generate significant amounts of hazardous materials that would require routine transport, use, or disposal of hazardous materials or create conditions involving the release of hazardous materials into the environment. PF-HHM-1 would be implemented as part of the project. Therefore, the Hawthorne Option would result in **less than significant impact** related to routine transport, use, and disposal of hazardous materials during operation.

3.9-4.2 Would the Project 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?

3.9-4.2.1 Construction Impacts

Less than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Proposed Project. Overall, the Proposed Project would have a **less than significant impact** during construction involving the release of hazardous materials into the environment.

Oil and Gas Pipelines

Less than Significant Impact. Oil and gas pipelines are located adjacent to the Proposed Project corridor, and oil refineries are located near the southern end. Oil and gas pipelines including a 10-inch Shell crude oil, 8-inch ExxonMobil jet fuel, and 20-inch Chevron gas lines run within the Metro ROW. Oil and gas pipelines may pose a hazard to human health and safety or to the environment if oil or gas are released. Release could occur through spills during construction or rupture of a pipeline during construction. At this phase of design, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place. Per the Metro Rail Design Criteria, Metro would continue to coordinate with the utility owners in future phases of design, and present preliminary relocation concepts to each utility owner with affected facilities. Metro would conduct additional surveys and potholing as needed to verify the relocation plans, which would avoid any conflicts with pipelines during construction. As noted in PF-US-1 in Section 3.11, Utilities and Service Systems, prior to ground-disturbing activities, all oil and gas pipelines within the ROW would be identified and marked onsite in coordination with the well owners to avoid damaging the pipelines. Utility agreements would be finalized to ensure the designs are prepared by third party utility owners. Therefore, the impact related to oil and gas pipelines would be **less than significant**.

Hazardous Gases

Less than Significant Impact. Common problems associated with oil fields and refineries include methane and hydrogen sulfide soil gas, oil seepage, contaminated soils, leaking wells, and wells not plugged and abandoned to current standards. Under certain conditions, the gases (for instance, methane gas, typically associated with petroleum production, natural seepage, or landfills) can become trapped under an impermeable layer. Human-made structures, such as pavement or structure foundations, can also prevent gas from venting to the atmosphere. As the gas accumulates, it can build up to high concentrations and pressures. Construction activities that involve substantial subsurface disturbance, such as drilling for column foundations, may inadvertently release the gas to the environment and public.

The Proposed Project would be traversing through small portions of Lawndale and Torrance oil fields in Los Angeles County. As noted in Section 3.9-3.1, there is one plugged and abandoned dry hole well

within the RSA as shown on the Figure 3.9-2 (near 171st Street within the Metro ROW). A dry hole well is a well (as for gas or oil) that was unproductive and hence abandoned. The abandoned wells are usually closed permanently using cement grout. Construction activities in this area would involve constructing the at-grade light rail guideway and relocating the freight track and would not involve deep subsurface disturbance. Additionally, based on a study conducted by California Energy Commission (CEC, 2020) on quantifying methane from California's plugged and abandoned oil and gas wells, methane emissions from abandoned/plugged wells in California are negligible, at least for wells located primarily outside large active oil and gas fields. Therefore, the likelihood that construction would release hazardous gases from the abandoned dry hole well is low. Additionally, it is unlikely that unknown abandoned oil wells and abandoned test borings (dry holes) may be present within the construction disturbance limits as the RSA does not pass through oil and gas fields.[1]

PF-HHM-6, Oil and Gas Wells would be implemented as part of the project, and would require that prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the Proposed Project would be identified, inspected, and addressed in accordance with CalGEM standards and in coordination with the well owners. Per PF-HHM-6, where the alignment cannot be adjusted to avoid well casings, the well would be abandoned in accordance with California Laws for Conservation of Petroleum and Gas (1997), Division 3. Oil and Gas, Chapter 1. Oil and Gas Conservation, Article 4, Sections 3228, 3229, 3230, and 3232. Therefore, the impact related to hazardous gases would be **less than significant**.

Contaminated Groundwater

Less than Significant Impact. Construction of the Proposed Project would involve pile foundations at aerial structures that would encounter potentially contaminated groundwater near areas identified in Table 3.9-1. Any extracted groundwater during construction should be managed properly to avoid release into the environment. PF-HHM-4 would be implemented as a part of the project, and would require preparation of Soil, Soil Vapor, and Groundwater Management Plans that require appropriate management of contaminated groundwater. The contaminated groundwater would be disposed of or discharged per PF-HHM-5, in compliance with all RWQCB and County of Los Angeles permit requirements. Therefore, the impact related to contaminated groundwater would be **less than significant**.

Buried Utilities

Less than Significant Impact. In addition to the oil and gas pipelines described above, several other buried utilities may be disturbed during construction activities. Potentially vulnerable/intrusive dry utilities include electrical ducts, train system and control duct banks, train and yard communications duct banks, train signaling duct banks, and natural gas lines. Disturbance to the dry utilities could result in interruptions of utility service, but there would not be a release of hazardous materials into the environment. Potentially vulnerable/intrusive wet utilities include the sewer lines, and domestic water lines, which, when damaged, may result in release of gray or black water causing potential contamination to the subsurface soil and groundwater. These waters usually consist of harmful bacteria

[1] Individual oil wells do not, in general, appear on the regulatory database listings unless associated soil or groundwater contamination have been brought to the attention of a regulatory agency.

and disease-causing pathogens which, when coming into contact with humans, may cause a health risk. At this phase of design, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place. Metro would continue to coordinate with the utility owners in future phases of design, and present preliminary relocation concepts to each utility owner with affected facilities. Utility agreements would be finalized to ensure the designs are prepared by third party utility owners. Per PF-US-1, prior to construction, the contractor would coordinate with utility owners and verify the location of existing utilities. Therefore, the impact related to buried utilities would be **less than significant**.

TRENCH OPTION

Less than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Trench Option. Overall, the Trench Option would have a **less than significant impact** during construction involving the release of hazardous materials into the environment. The potential for significant public or environmental hazards resulting from reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment was evaluated individually for construction and operations based on the differences in pertinent environmental concerns.

Oil and Gas Pipelines

Less than Significant Impact. The Trench Option would be located in the same area as the Proposed Project but would require greater disturbance to the ground for below-grade sections of the length of the Project. Compared to the Proposed Project, there would be a greater risk of release through spills or rupture of a pipeline during construction of the trench segment. As with the Proposed Project, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place for the Trench Option. As noted in PF-US-1 in Section 3.11, Utilities and Service Systems, prior to ground-disturbing activities, Metro would continue to coordinate with the utility owners in future phases of design to avoid conflicts with oil and gas pipelines. Therefore, the impact related to oil and gas pipelines would be less than significant.

Hazardous Gases

Less than Significant Impact. Constructing the trench would require greater disturbance to the ground for below-grade sections of the length of the alignment and could create a passage for potential pathway for accumulating hazardous gases emanating from nearby oil field activities. The Trench Option is located within the same corridor as the Proposed Project, and there is one plugged and abandoned dry hole well within the RSA as shown on the Figure 3.9-2 (near 171st Street within the Metro ROW). The construction of the Trench Option in this area would involve deeper subsurface disturbance, compared to the Proposed Project. However, the likelihood that the dry hole well would lead to hazardous gas emissions during construction are low, given the nature of the well. Additionally, it is unlikely that unknown abandoned oil wells and abandoned test borings (dry holes) may be present within the construction disturbance limits as the RSA does not pass through oil and gas fields.

PF-HHM-6 would be implemented as a part of the project, and would require that prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the project would be identified, inspected, and addressed in accordance with CalGEM standards and in coordination with the well owners.

Trench construction would involve dewatering potentially contaminated groundwater, which has the potential for off-gassing any dissolved VOCs into the surroundings. However, PF-HHM-4 would be

implemented as a part of the project, and would prepare Soil, Soil Vapor, and Groundwater Management Plans requiring appropriate management of contaminated groundwater and gases. Therefore, the impact related to hazardous gases would be **less than significant**.

Contaminated Groundwater

Less than Significant Impact. The deepest trench section is near Inglewood Avenue and Manhattan Beach Boulevard, where trench depths are between 30 feet to 40 feet. Groundwater in that area is in the range of approximately 20 to 25 feet bgs, and various sites in that area have resulted in a contaminated groundwater plume.

Dewatering activities during construction have the potential to cause contaminated groundwater to release into the environment, migrate farther into the groundwater table, or to release contaminated groundwater into drainage systems if proper procedures are not followed. PF-HHM-4 would be implemented as a part of the project, and would require preparation of Soil, Soil Vapor, and Groundwater Management Plans that require appropriate management of contaminated groundwater. The contaminated groundwater would be disposed of or discharged per PF-HHM-5, in compliance with all RWQCB and County of Los Angeles permit requirements. Therefore, the impact related to contaminated groundwater would be **less than significant**.

Buried Utilities

Less than Significant Impact. Similar to the Proposed Project, construction of the Trench Option could disrupt buried utilities, such as sewer lines or domestic water lines, which may result in release of gray or black water causing potential contamination to the subsurface soil and groundwater. At this phase of design, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place. Per standard practice, utility coordination meetings with third parties would continue through future design phases on plans for relocation or protect-in-place to avoid conflicts with the utilities. Per PF-US-1, prior to construction, the contractor would coordinate with utility owners and verify the location of existing utilities. Therefore, the impact related to buried utilities would be **less than significant**.

HAWTHORNE OPTION

Less than Significant Impact. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Hawthorne Option. Overall, the Hawthorne Option would have a **less than significant impact** during construction involving the release of hazardous materials into the environment.

Oil and Gas Pipelines

Less than Significant Impact. The Hawthorne Option alignment would be located within the Metro ROW from the Redondo Beach (Marine) Station to approximately 2,000 feet south, before it leaves the Metro ROW. The impacts related to oil and gas lines that are located within the ROW are similar to those discussed for the Proposed Project but are of lesser magnitude because of the shorter length of the alignment within the freight corridor. As with the Proposed Project, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place for the Hawthorne Option. As noted in PF-US-1 in Section 3.11, Utilities and Service Systems, prior to ground-disturbing activities, Metro would continue to coordinate with the utility owners in future phases of design to avoid conflicts with oil and gas pipelines. Therefore, the impact related to oil and gas pipelines would be **less than significant**.

Hazardous Gases

Less than Significant Impact. The construction of the elevated alignment would require piles with vertical subsurface disturbance. Similar to the Proposed Project, drilling for deep foundations that involve substantial subsurface disturbance may inadvertently release the gas to the environment and public. There is one plugged and abandoned dry hole well within 200 feet of the Hawthorne Option as shown on the Figure 3.9-2. However, the likelihood that the dry hole well would lead to hazardous gas emissions during construction are low, given the nature of the well. Additionally, it is unlikely that unknown abandoned oil wells and abandoned test borings (dry holes) may be present within the construction disturbance limits as the RSA does not pass through oil and gas fields. PF-HHM-6 would be implemented as part of the project, which would require that prior to ground-disturbing activities, all oil wells (including abandoned or suspected wells) within 200 feet of the Proposed Project would be identified, inspected, and addressed in accordance with CalGEM standards and in coordination with the well owners. Therefore, the impact related to hazardous gases would be **less than significant**.

Contaminated Groundwater

Less than Significant Impact. Construction of the Hawthorne Option would involve pile foundations at elevated structures that would encounter potentially contaminated groundwater near areas identified in Table 3.9-1. Any extracted groundwater during construction would be managed properly to avoid release into the environment. PF-HHM-4 would be implemented as a part of the project, and would require preparation of Soil, Soil Vapor, and Groundwater Management Plans that require appropriate management of contaminated groundwater. The contaminated groundwater would be disposed of or discharged per PF-HHM-5, in compliance with all RWQCB and County of Los Angeles permit requirements. Therefore, the impact related to contaminated groundwater would be **less than significant**.

Buried Utilities

Less than Significant Impact. Construction of the Hawthorne Option could disrupt buried utilities, such as sewer lines or domestic water lines, which may result in release of gray or black water causing potential contamination to the subsurface soil and groundwater. The Hawthorne Option alignment would primarily be constructed within city street right-of-way , and therefore has a greater chance of conflict with municipal buried utilities, compared with the Proposed Project, which is primarily within the freight corridor. At this phase of design, Metro has obtained as-built drawings from these utility owners and developed preliminary plans for relocation or protect-in-place. Per standard practice, utility coordination meetings with third parties would continue through future design phases on plans for relocation or protect-in-place to avoid conflicts with the utilities. Per PF-US-1, prior to construction, the contractor would coordinate with utility owners and verify the location of existing utilities. Therefore, the impact related to buried utilities would be **less than significant**.

3.9-4.2.2 Operational Impacts

Less than Significant Impact. Once the Proposed Project is operational, the risks discussed in Section 3.9-4.2.1 regarding construction impacts would end. Operation of the Proposed Project would involve the occasional use and storage of routine detergents and cleansers for vehicle maintenance activities. There would also be potential for fuels, oils, and transmission fluids to drip or spill from Metro support vehicles in limited quantities. Accidental exposure to some of these chemicals can pose physical hazards (e.g., chemical burns) or health hazards (e.g., poisoning), which may give rise to acute or chronic illnesses. The properties and health effects of different chemicals are unique to each chemical and

depend on the extent to which an individual is exposed. The exposure of individuals to hazardous materials is minimal, given the limited quantities of these materials that would be stored and used on the project site. The Proposed Project would not include use or storage of chemicals that have the potential to result in an off-site upset or accidental event. Therefore, the Proposed Project would result in a **less than significant impact** related to accident conditions involving the release of hazardous materials into the environment during operation.

TRENCH OPTION

Less than Significant Impact. Similar to the Proposed Project, the Trench Option would not include use or storage of chemicals, or disturbance in areas with active or abandoned oil and gas wells that have the potential to result in an off-site upset or accidental event. Therefore, the Trench Option would result in a **less than significant impact** related to accident conditions involving the release of hazardous materials into the environment during operation.

HAWTHORNE OPTION

Less than Significant Impact. Similar to the Proposed Project, the Hawthorne Option would not include use or storage of chemicals or disturbance in areas with active or abandoned oil and gas wells that have the potential to result in an off-site upset or accidental event. Therefore, the Hawthorne Option would result in a **less than significant impact** related to accident conditions involving the release of hazardous materials into the environment during operation.

3.9-4.3 Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

3.9-4.3.1 Construction Impacts

Less than Significant Impact. RK Lloyde Continuation High School and Centinela Valley Independent Study School are located near the northern end of the RSA within a quarter-mile of the existing Redondo Beach (Marine) Station. Environmental Charter High School, William Green Elementary School, Adams Middle School, Washington Elementary School, and Franklin School are located near the central portion of the RSA between Manhattan Beach Boulevard and 190th Street within a quarter-mile of the Proposed Project. There are no proposed schools within a quarter-mile of the Proposed Project; therefore, this analysis focuses on existing schools. The RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Proposed Project within a quarter-mile of a school. Overall, the Proposed Project would have a **less than significant impact** during construction related to the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school. The following sections describe the impacts in detail for the types of hazards.

Hazardous Emissions

Less than Significant Impact. As noted in Section 3.9-3.1, ACM may be emitted during demolition of older structures. PF-HHM-2 would be implemented as a part of the project, and would require demolition plans that detail the procedures for ACMs, LBP, PCB, TWW, and universal waste encountered during demolition activities in accordance with federal and state regulations. Excavation of soils within the RSA that are potentially contaminated with VOCs would need to be properly handled for disposal. Some of the proper soil handling considerations include use of temporary fencing and/or caution tape to minimize workers at the contaminated site, use of air monitoring devices, covering the stockpiled soil with plastic sheeting to control dust and minimize exposure, and ensuring compliance with the approved soil management plan. The hazardous waste and hazardous materials plan required as a part

of PF-HHM-1 would include provisions for the handling and transport of contaminated soil in compliance with SCAQMD Rule 1166. Additionally, PF-AQ-1, Metro Green Construction Policy Compliance would be implemented, requiring construction to comply with the provisions of the Metro Green Construction Policy, which include provisions for emissions and fugitive dust control. Therefore, the impact related to hazardous emissions within a quarter-mile of an existing school would be **less than significant**.

Handling of Hazardous Materials

Less than Significant Impact. During construction, there would be use of commercially available hazardous materials such as gasoline, brake fluids, coolants, and paints. Standard equipment maintenance and good housekeeping practices during construction would minimize the risk of any release; however, if any release of these substances did occur, releases are anticipated to be localized and unlikely to pose a risk to the educational institutions within a quarter-mile of construction activities. Additionally, PF-HHM-1 would be implemented, including preparation of plans detailing BMPs regarding hazardous material transport, storage, and use, as well as BMPs for cleanup should releases occur. PF-HHM-2 and PF-AQ-1 would be implemented as a part of the project, and would include preparation of demolition plans, provisions for the handling and transport of contaminated soil in compliance with SCAQMD Rule 1166, and emissions controls in compliance with Metro's Green Construction Policy. Therefore, impacts related to handling of hazardous materials within quarter-mile of an existing school would be **less than significant**.

TRENCH OPTION

Less than Significant Impact. As with the Proposed Project, the RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Trench Option within a quarter-mile of a school. Overall, the Trench Option would have a **less than significant impact** during construction related to the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within quarter-mile of a school. The following sections describe the impacts in detail for the types of hazards.

Hazardous Emissions

Less than Significant Impact. The Trench Option is in the same corridor as the Proposed Project, and the same schools as described above would be within a quarter-mile of the Trench Option. Construction of the Trench Option would have similar hazards as identified for the Proposed Project during demolition and excavation of soils potentially contaminated with VOCs. PF-HHM-1, PF-HHM-2, and PF-AQ-1 would be implemented as a part of the project, and would include preparation of plans detailing BMPS regarding handling of hazardous materials, preparation of demolition plans, provisions for the handling and transport of contaminated soil in compliance with SCAQMD Rule 1166, and emissions controls in compliance with Metro's Green Construction Policy. Therefore, the impact related to hazardous emissions would be **less than significant**.

Handling of Hazardous Materials

Less than Significant Impact. Similar to the Proposed Project, commercially available hazardous materials would be used during construction, and releases of these materials would be localized and unlikely to pose a risk to nearby schools. As described above, PF-HHM-1, PF-HM-2, and PF-AQ-1 would be implemented as part of the project, and would include preparation of plans detailing BMPs regarding hazardous material transport, storage, and use, as well as BMPs for cleanup should releases occur. Therefore, the impact related to handling of hazardous materials would be **less than significant**.

HAWTHORNE OPTION

Less than Significant Impact. As with the Proposed Project, the RSA contains multiple sources of potentially hazardous materials that could be encountered during construction of the Hawthorne Option within a quarter-mile of a school. Overall, the Hawthorne Option would have a **less than significant impact** during construction related to the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within a quarter-mile of a school. The following sections describe the impacts in detail for the types of hazards.

Hazardous Emissions

Less than Significant Impact. The Hawthorne Option would be within a quarter-mile of the same schools as the Proposed Project, except for Adams Middle School, Washington Elementary School, and Franklin School. Construction of the Hawthorne Option would have similar hazards as identified for the Proposed Project Option during demolition and excavation of soils potentially contaminated with VOCs. PF-HHM-1, PF-HHM-2, and PF-AQ-1 would be implemented as a part of the project, and would include demolition plans, provisions for the handling and transport of contaminated soil in compliance with SCAQMD Rule 1166, and emissions controls in compliance with Metro's Green Construction Policy. Therefore, the impact related to hazardous emissions within a quarter-mile of an existing school would be **less than significant**.

Handling of Hazardous Materials

Less than Significant Impact. Construction of the Hawthorne Option would have similar hazards as identified for the Proposed Project. As described above, PF-HHM-1, PF-HHM-2, and PF-AQ-1 would be implemented as part of the project, and would minimize impacts related to handling of hazardous materials. Therefore, impacts related to handling of hazardous materials within a quarter-mile of an existing school would be **less than significant**.

3.9-4.3.2 Operational Impacts

No Impact. Operation of the Proposed Project would involve the occasional use and storage of routine detergents and cleansers for vehicle maintenance activities. There would also be potential for fuels, oils, and transmission fluids to drip or spill from Metro support vehicles in limited quantities. However, the potential for exposure to these hazards and hazardous materials would be limited to within the project ROW. In addition, site personnel shall be trained in site-specific hazardous materials spill response. Metro staff is available 24 hours a day through the Quality Assurance Department to respond to hazardous materials releases, and Metro sites frequently undergo emergency response drills. There would be no hazardous emissions associated with operations of the Proposed Project. Therefore, the operation of Proposed Project would result in **no impact** related to hazardous emissions or the handling of hazardous materials and waste within a quarter-mile of an existing school.

TRENCH OPTION

No Impact. Similar to that noted in the Proposed Project section, operations of the Trench Option would not result in significant hazardous emissions. Therefore, the operation of the Trench Option would result in **no impact** related to hazardous emissions or the handling of hazardous materials and waste within a quarter-mile of an existing school.

HAWTHORNE OPTION

No Impact. Similar to that noted in the Proposed Project section, operations of the Hawthorne Option would not result in significant hazardous emissions. Therefore, the operation of the Hawthorne Option

would result in **no impact related** to hazardous emissions or the handling of hazardous materials and waste within a quarter-mile of an existing school.

3.9-4.4 Would the Project 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?

3.9-4.4.1 Construction Impacts

Less than Significant Impact. The Proposed Project is in a highly urbanized setting and traverses the cities of Redondo Beach, Lawndale, and Torrance. Based on the review of EDR records, the Proposed Project is not directly located on a site that is on a list of sites pursuant to Section 65962.5 (Cortese), but the construction of the portions of the Proposed Project may occur near sites that are on the list (some of which may have ongoing remediation activities). Section 3.9-3.1 describes the REC sites and the databases where they are listed including, but not limited to, DTSC EnviroStor and CORTESE within the RSA that may have potential subsurface contamination that may be implicated by the proposed construction. Table 3.9-2 lists the sites that would be disturbed during construction or acquired for the Proposed Project, which are mapped in Figure 3.9-3 through Figure 3.9-6.

Table 3.9-2. Potential REC Sites for the Proposed Project

Map ID[1]	Site Name	Distance from Project (In Feet)	Discussion
1	Voi-Shan Aerospace, Inc. (former)	875 feet, north	Construction may disturb groundwater between Marine Avenue and Manhattan Beach Boulevard. A limited Phase II site investigation is recommended to evaluate groundwater for TPH, VOC, SVOC and metals in this area.
4	Merrell Paint Co., Inc.	150 feet, north	Groundwater extracted during construction adjoining the subject site may have minor concentrations of residual contamination. A limited Phase II site investigation is recommended to evaluate groundwater for TPH and VOC between Inglewood Avenue and Manhattan Beach Boulevard.
5	Westwood Building Materials	Directly adjacent, south	Groundwater extracted during construction adjoining the subject site may have minor concentrations of residual contamination. A limited Phase II site investigation is recommended to evaluate groundwater for TPH and VOC between Inglewood Avenue and Manhattan Beach Boulevard.
6	Tosco-76 Station #4817	350 feet, south	Residual contamination is considered a low threat to groundwater, but a portion of the subject site would be acquired for the Proposed Project. Therefore, a limited Phase II site investigation is recommended to evaluate for TPH to determine the status of residual contamination on site.
7	City of Lawndale Garage	205 feet, west	Contamination levels in the soils on site are low, but a portion of the subject site would be disturbed during construction for the Proposed Project. Therefore, a limited Phase II site investigation is recommended test for TPH to determine the status of residual contamination on site.
12	Union Carbide Corporation (UCC)	Adjacent, south	Given the site's proximity to the construction area, a Phase II site investigation is recommended to evaluate soils and groundwater for TPH, VOC, SVOC, dripolene, and metals in the area adjacent to the subject property.

Map ID[1]	Site Name	Distance from Project (In Feet)	Discussion
13	North Posse Site	Adjacent, west	A portion of the site would be acquired. A Phase II site investigation is recommended to evaluate soils and groundwater for TPH, VOC, SVOC, ACM, and metals along the alignment between Prairie Avenue and Del Amo Boulevard.
14	Former Amp-Matrix Facility	600 feet south	Construction may disturb groundwater near the site. A Phase II site investigation is recommended to evaluate groundwater for TPH and VOC along the alignment.
15	Torrance/Dowell Schlumberger, Inc.	Adjacent, north	The site would not be disturbed, but due to the lack of records indicating assessment and corrective actions, and the proximity to the Proposed Project, a Phase II site investigation is recommended to evaluate soils and groundwater for TPH, VOC, SVOC, and metals along the northern portion of the Torrance TC.
16	DOW Chemical Company	Northeast	The site would not be disturbed, but due to its proximity to the project, a Phase II site investigation is recommended to evaluate soils and groundwater for TPH, VOC, SVOC, and metals along the northern portion of the Torrance TC.
17	PPG Industries, Inc.	Directly adjacent, north	The subject site is not a REC; however, construction involving subsurface disturbance would follow the soil management plan per PF-HHM-4.
18	Vought Aircraft Industries, Inc.	Directly adjacent, south	Construction activities would disturb soil along the subject site. A Phase II site investigation is recommended to evaluate soils, up to depth of 15 feet bgs or to proposed disturbance depth, whichever is lower, for TPH and VOC along the alignment adjacent to the Torrance TC.
19	Exxon Mobil Oil Torrance Refinery	Directly adjacent, east	Construction activities may disturb groundwater between Prairie Avenue and Del Amo Boulevard. A Phase II site investigation is recommended to evaluate soils and groundwater between Prairie Avenue and Del Amo Boulevard.

Note: South of 190th Street, there is one alignment for the Proposed Project, and no options.
[1]Map ID numbers correspond to site numbers shown on Figure 3.9-3 and Figure 3.9-6
TPH=total petroleum hydrocarbons; SVOC= semi-volatile organic compound; VOC= Volatile Organic Compound; REC= Recognized Environmental Conditions; TC= Transit Center; ACM= Asbestos Containing Materials

Construction activities such as grading, or any other ground-disturbing activities could encounter contaminants or interfere with ongoing remediation efforts. Unless construction activities are coordinated with site-remediation activities, there could be a temporary increased risk of damage to or interference with groundwater remediation facilities (e.g., extraction and monitoring wells, pumps, and pipelines). Construction at sites with existing contamination could also result in the generation of additional waste materials and could expose workers to hazardous materials.

Project-related effects of hazardous waste containing chemical compounds would generally be limited to areas where the RECs have been identified or unanticipated contamination at unknown releases. The size of these impacted areas would depend upon the volume and nature of the release materials and the general condition of the release site (e.g., paved, unpaved, sloped, flat, bermed). The individuals most at-risk would be construction workers, or others in the immediate vicinity during excavation, transportation, or storage of the hazardous wastes, or during demolition and construction. The

exposure pathways through which these individuals could be exposed include inhalation, ingestion, or dermal contact.

The contractor would be required to implement federal and state handling and disposal regulations. As part of the project, PF-HHM-1 and PF-HHM-4 would be implemented, which would reduce the risk of impacts related to hazardous contaminants encountered during construction as well as hazardous materials used during construction. PF-HHM-3 would require Phase II site investigations to be completed prior to construction for the sites identified in Table 3.9-2. The Phase II site investigation results will be used in preparation of construction management plans to handle construction spoils in areas that are identified as contaminated. Additionally, PF-HHM-5 would ensure that contaminated groundwater would be managed appropriately according to federal and state regulations. Therefore, the Proposed Project would have a **less than a significant impact** related to hazardous material sites during construction.

TRENCH OPTION

Less than Significant Impact. The Trench Option would be located in the same corridor as the Proposed Project and has the potential to encounter the same five RECs between the Redondo Beach (Marine) Station and 190th Street (south of 190th Street, the alignment is the same as the Proposed Project). These include sites 1, 4, 5, 6, and 7, which are listed in Table 3.9-2.

Construction of Trench Option would result in greater ground disturbance when compared to the Proposed Project. As a result of disturbing more ground, there is an increase in opportunities to encounter hazardous materials under the Trench Option in comparison to the Proposed Project. In addition to the REC sites that are to be evaluated, then Trench Option would require handling potentially contaminated groundwater that would be extracted during construction.

While there would be more handling of potentially contaminated materials under the Trench Option, as with the Proposed Project, the contractor would be required to implement federal and state handling and disposal regulations. As part of the project, PF-HHM-1 and PF-HHM-4 would be implemented, which would reduce the risk of impacts related to hazardous contaminants encountered during construction as well as hazardous materials used during construction. PF-HHM-3 would require Phase II site investigations to be completed prior to construction for the sites identified in Table 3.9-2. The Phase II site investigation results will be used in preparation of construction management plans to handle construction spoils in areas that are identified as contaminated. Additionally, PF-HHM-5 would ensure that contaminated groundwater would be managed appropriately according to federal and state regulations. Therefore, the Trench Option would have a **less than significant impact** related to hazardous material sites during construction.

HAWTHORNE OPTION

Less than Significant Impact. Construction of the Hawthorne Option may occur at or near REC sites (some of which may have ongoing remediation activities). Between the Redondo Beach (Marine) Station and 190th Street, sites 1 and 4 as described in Table 3.9-2 would also apply to the Hawthorne Option (south of 190th Street, the alignment is the same as the Proposed Project). Table 3.9-3 lists the six REC sites unique to the Hawthorne Option, which are mapped in Figure 3.9-3 and Figure 3.9-4. Similar to the Proposed Project, the contractor would be required to implement federal and state handling and disposal regulations. As part of the project, PF-HHM-1 and PF-HHM-4 would be implemented, which would reduce the risk of impacts related to hazardous contaminants encountered during construction as well as hazardous materials used during construction. PF-HHM-3 would require Phase II site

investigations to be completed prior to construction for the sites listed in Table 3.9-3. The Phase II site investigation results will be used in preparation of construction management plans to handle construction spoils in areas that are identified as contaminated. Additionally, PF-HHM-5 would ensure that contaminated groundwater would be managed appropriately according to federal and state regulations. Therefore, the Hawthorne Option would have a **less than significant impact** related to hazardous material sites during construction.

Table 3.9-3. Potential REC Sites for the Hawthorne Option

Map ID[1]	Site Name	Distance from Project (Feet)	Discussion
2	Mobil Oil Corp (former)	Directly under alignment	The site would be acquired. Further assessment is recommended to determine the status of the past release at the site.
3	Electra Media Inc.,	Directly adjacent, south	A portion of the site would be acquired. Further assessment is recommended to determine the status of the past release at the site.
8	Thrifty #257	Directly adjacent, west	The site would not be disturbed, but based on the site proximity and ongoing remediation, a Phase II site investigation is recommended to evaluate soil and groundwater for TPH, VOC, and SVOC along the alignment between 165th and 166th Street.
7	Arco #5107	Directly adjacent, east	The site would not be disturbed, but based on the site proximity and ongoing remediation, a limited Phase II site investigation is recommended to evaluate soil and groundwater for TPH, VOC, and SVOC along the alignment between 165th and 166th Street.
10	United Oil Co.,	Directly adjacent, east	The site would not be disturbed, but based on the site proximity, a limited Phase II site investigation is recommended to evaluate soil and groundwater for TPH and VOC along the alignment adjacent to the subject property.
11	Chevron Company Pipeline Right-of-Way (former)	Directly under alignment	The site would be acquired. Further assessment is recommended to determine the status of the past release at the site.

Note: South of 190th Street, there is one alignment for the Proposed Project, and no options.
[1]Map ID numbers correspond to site numbers shown on Figure 3.9-3 and Figure 3.9-6
TPH=total petroleum hydrocarbons; SVOC= semi-volatile organic compound; VOC= Volatile Organic Compound

3.9-4.4.2 Operational Impacts

No Impact. The exposure to any potential hazardous materials from off-site sources would cease after construction activity because there will not be any subsurface disturbance. Therefore, the Proposed Project would result in **no impact** related to operations associated with Government Code Section 65962.5.

TRENCH OPTION

No Impact. The exposure to any potential hazardous materials from off-site sources would cease after construction activity because there will not be any subsurface disturbance. Therefore, the Trench Option would result in **no impact** related to operations associated with Government Code Section 65962.5.

HAWTHORNE OPTION

No Impact. The exposure to any potential hazardous materials from off-site sources would cease after construction activity because there will not be any subsurface disturbance. Therefore, the Hawthorne

Option would result in **no impact** related to operations associated with Government Code Section 65962.5.

3.9-4.5 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 or excessive noise for people residing or working in the Project Area?

No Impact. The Proposed Project is not within an airport land use plan or within two miles of any airport. Therefore, the Proposed Project would have **no impact** related to safety hazards associated with a public airport or public use airport during construction or operation.

TRENCH OPTION

No Impact. For the same reasons as with the Proposed Project, the Trench Option would have **no impact** related to safety hazards associated with a public airport or public use airport during construction or operation.

HAWTHORNE OPTION

No Impact. For the same reasons as with the Proposed Project, the Hawthorne Option would have **no impact** related to safety hazards associated with a public airport or public use airport during construction or operation.

3.9-4.6 For a project located within the vicinity of a private airstrip, as a result, create a safety hazard for people residing or working in the project area.

No Impact. The Proposed Project is not within the vicinity of a private airstrip. Therefore, the Proposed Project would have **no impact** related to safety hazards associated with private airstrip during construction or operation.

TRENCH OPTION

No Impact. For the same reasons as with the Proposed Project, the Trench Option would have **no impact** related to safety hazards associated with a private airstrip during construction or operation.

HAWTHORNE OPTION

No Impact. For the same reasons as with the Proposed Project, the Hawthorne Option would **have no impact** related to safety hazards associated with a private airstrip during construction or operation.

3.9-4.7 Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

3.9-4.7.1 Construction Impacts

Less and Significant. As described in Section 3.1, Transportation, PF-T-1 would be implemented, which would require the contractor to prepare a construction traffic management plan (CTMP) that would address emergency access during construction. The CTMP would include street closure information, detour plans, haul routes, and a staging plan based on the nature and timing of specific construction activities at each of the construction sites. The CTMP would ensure there would be no impairment to any adopted emergency response plans or emergency evacuation routes within the RSA. Therefore, the Proposed Project would result in a **less than significant impact** related to impairment of an adopted emergency response plan or emergency evacuation plan.

TRENCH OPTION

Less than Significant Impact. Like the Proposed Project, construction of the Trench Option would require a CTMP per PF-T-1 that would phase any road closures and maintain emergency access. Therefore, the Trench Option would result in a **less than significant impact** related to impairment of an adopted emergency response plan or emergency evacuation plan.

HAWTHORNE OPTION

Less than Significant Impact. Like the Proposed Project, construction of the Hawthorne Option would require a CTMP per PF-T-1 that would phase any road closures and maintain emergency access. Therefore, the Hawthorne Option would result in a **less than significant impact** related to impairment of an adopted emergency response plan or emergency evacuation plan.

3.9-4.7.2 Operational Impacts

Less than Significant Impact. The operation of the Proposed Project would maintain or improve all existing freight crossings, build multiple grade-separated crossings that would not hinder emergency routes or evacuation, and add two light rail tracks and crossing safety improvements to the two existing at-grade freight crossings at 170th Street and 182nd Street. While these crossings would be intermittently blocked by passing trains for 15 to 90 seconds at a time, neither street is on an evacuation route, nor would access from evacuation or disaster routes be cut off while gate arms are down at the crossing. Therefore, operation of the Proposed Project would result in a **less than significant impact** to emergency response and evacuation plans.

TRENCH OPTION

Less than Significant Impact. Like the Proposed Project, the Trench Option would not close any existing roadway segments or crossings. Additionally, there would be no at-grade crossings and therefore no intermittent closures of crossings as the light rail train operates. Therefore, operation of the Trench Option would result in a **less than significant impact** to emergency response and evacuation plans.

HAWTHORNE OPTION

Less than Significant Impact. Like the Proposed Project, the Hawthorne Option would not close any existing roadway segments or crossings. Additionally, there would be no at-grade crossings and therefore no intermittent closures of crossings as the light rail train operates. Therefore, operation of the Hawthorne Option would result in a **less than significant impact** to emergency response and evacuation plans.

3.9-4.8 Would the Project expose people or structures to a significant risk of loss, injury or death involving wildfires, including where wildland fires are adjacent to urbanized areas or where residences are intermixed with wildlands?

No Impact. The Proposed Project is in a highly urbanized area, and no portion of the RSA is within or close to areas prone to wildfires. Therefore, the Proposed Project would have **no impact** related to safety hazards associated with wildfires during construction or operation.

TRENCH OPTION

No Impact. For the same reasons as with the Proposed Project, the Trench Option would have **no impact** related to safety hazards associated with wildfires during construction or operation.

HAWTHORNE OPTION

No Impact. For the same reasons as with the Proposed Project, the Hawthorne Option would have **no impact** related to safety hazards associated with wildfires during construction or operation.

3.9-5 Mitigation Measures

No mitigation measures are required, as there are no significant impacts to hazards and hazardous materials.

3.9-6 Project Impacts Remaining After Mitigation

As described in Section 3.9-5 no mitigation measures are required to reduce construction and operation impacts to a level below significance.

3.9-7 Cumulative Impacts

The methodology for cumulative analysis and a description of relevant projects and projections are included in Section 3.0, Introduction. The geographic scope for the hazardous materials cumulative impact analysis is the RSA defined in Section 3.9-2.1 as , as that is considered the area necessary to construct, maintain, and operate the Proposed Project and Options. The following projects are included within the RSA:

> Torrance Industrial Exchange

3.9-7.1 Proposed Project

The Proposed Project would not result in significant impacts related to hazards and hazardous materials during construction or operations. The Proposed Project would be required to comply with all prescribed standards, requirements, and guidance related to hazards and hazardous waste. The Torrance Industrial Exchange is located within the cumulative RSA and is immediately adjacent to the Metro ROW; it could be constructed concurrently with the Proposed Project, but in general, impacts associated with hazards and hazardous materials are site-specific and largely localized. This project and other future projects would also comply with all the same requirements and apply mitigation measures as necessary to minimize impacts. Therefore, the Proposed Project in combination with related past, present, and probable future projects would not result in significant cumulative hazards and hazardous impacts during construction or operations.

3.9-7.2 Trench Option

Although the Trench Option may result in incrementally different impacts related to hazards and hazardous wastes than those analyzed under the Proposed Project, the Trench Option would result in a similar potential for cumulative impacts. The Trench Option and future projects would be required to comply with all prescribed standards, requirements, and guidance related to hazards and hazardous waste. Therefore, the Trench Option in combination with related past, present, and probable future projects would not result in significant cumulative hazards and hazardous impacts during construction or operations.

3.9-7.3 Hawthorne Option

Although the Hawthorne Option may result in incrementally different impacts related to hazards and hazardous wastes than those analyzed under the Proposed Project, the Hawthorne Option would result in a similar potential for cumulative impacts. The Hawthorne Option and future projects would be required to comply with all prescribed standards, requirements, and guidance related to hazards and

hazardous waste. Therefore, the Hawthorne Option in combination with related past, present, and probable future projects would not result in significant cumulative hazards and hazardous impacts during construction or operations.