Appendix H

Hydrology Report

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6136 WEST MANCHESTER AVENUE

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WATER RESOURCES TECHNICAL REPORT

OCTOBER 2024

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1. INTRODUCTION

1.1. PROJECT DESCRIPTION

The Project Site is located at 6136 Manchester Avenue and 8651 La Tijera Boulevard within the Westchester–Playa del Rey Community Plan area of the City of Los Angeles (City). The Project Site is triangularly shaped and comprised of two parcels. The Project Site is generally bounded by Manchester Avenue to the north, La Tijera Boulevard to the southeast, and Truxton Avenue to the southwest.

The Project would include the development of a new approximately 416,915-square-foot building comprised of 489 residential units, including six live-work units and 64 dwelling units set aside for Very Low-Income Households, and 16,120 square feet of ground-floor commercial space. The proposed uses would be located within an eight-story building with a maximum height of 96 feet. The Project would provide 549 vehicular parking spaces that would be located within two subterranean parking levels and buffered into the first and second level of the building. In addition, the Project would include approximately 51,385 square feet of open space, including 43,235 square feet of common open space and 8,150 square feet of private open space. As part of the Project, the existing commercial structures totaling 21,911 square feet of floor area would be removed. The Project would result in a total floor area of approximately 416,915 square feet with a floor area ratio (FAR) of 4:1.

1.2. SCOPE OF WORK

This report provides a description of the existing surface water hydrology, surface water quality, groundwater level, and groundwater quality at the Project Site. In addition, the report includes an analysis of the Project's potential impacts related to surface water hydrology, surface water quality, groundwater level, and groundwater quality.

2. REGULATORY FRAMEWORK

2.1. SURFACE WATER HYDROLOGY

County of Los Angeles Hydrology Manual

Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County Department of Public Works Hydrology Manual as its basis of design for storm drainage facilities. The Los Angeles County Department of Public Works' Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event.[1] The County also limits the allowable discharge into existing storm drain facilities based on the municipal separate storm sewer system (MS4) Permit and is enforced on all new developments that discharge directly into the County's storm drain system. Any proposed drainage improvements of County owned storm drain facilities such as catch

[1] Los Angeles County Department of Public Works Hydrology Manual, January 2006, <http://ladpw.org/wrd/publication/index.cfm>.

basins and storm drain lines requires the approval/review from the County Flood Control District department.

Los Angeles Municipal Code (LAMC)

Any proposed drainage improvements within the street right of way or any other property owned by, to be owned by, or under the control of the City requires the approval of a B-permit (Section 62.105, LAMC). Under the B-permit process, storm drain installation plans are subject to review and approval by the City of Los Angeles Department of Public Works Bureau of Engineering. Additionally, any connections to the City's storm drain system from a property line to a catch basin or a storm drain pipe requires a storm drain permit from the City of Los Angeles Department of Public Works, Bureau of Engineering.

2.2. SURFACE WATER QUALITY

Clean Water Act

The Clean Water Act was first introduced in 1948 as the Water Pollution Control Act. The Clean Water Act authorizes Federal, state, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. The primary goals of the Clean Water Act are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable and swimmable. As such, the Clean Water Act forms the basic national framework for the management of water quality and the control of pollutant discharges. The Clean Water Act also sets forth a number of objectives in order to achieve the above-mentioned goals. These objectives include regulating pollutant and toxic pollutant discharges; providing for water quality that protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources of pollution.[2]

Since its introduction, major amendments to the Clean Water Act have been enacted (e.g., 1961, 1966, 1970, 1972, 1977, and 1987). Amendments enacted in 1970 created the U.S. Environmental Protection Agency (USEPA), while amendments enacted in 1972 deemed the discharge of pollutants into waters of the United States from any point source unlawful unless authorized by a USEPA National Pollutant Discharge Elimination System (NPDES) permit. Amendments enacted in 1977 mandated development of a "Best Management Practices" Program at the state level and provided the Water Pollution Control Act with the common name of "Clean Water Act," which is universally used today. Amendments enacted in 1987 required the USEPA to create specific requirements for discharges.

In response to the 1987 amendments to the Clean Water Act and as part of Phase I of its NPDES permit program, the USEPA began requiring NPDES permits for: (1) municipal separate storm sewer systems (MS4) generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five

[2] Non-point sources of pollution are carried through the environment via elements such as wind, rain, or stormwater and are generated by diffuse land use activities (such as runoff from streets and sidewalks or agricultural activities) rather than from an identifiable or discrete facility.

acres or more of land. Phase II of the USEPA's NPDES permit program, which went into effect in early 2003, extended the requirements for NPDES permits to: (1) numerous small municipal separate storm sewer systems,[3] (2) construction sites of one to five acres, and (3) industrial facilities owned or operated by small municipal separate storm sewer systems. The NPDES permit program is typically administered by individual authorized states.

In 2008, the USEPA published draft Effluent Limitation Guidelines (ELGs) for the construction and development industry. On December 1, 2009, the EPA finalized its 2008 Effluent Guidelines Program Plan.

In California, the NPDES stormwater permitting program is administered by the State Water Resources Control Board (SWRCB). The SWRCB was created by the Legislature in 1967. The joint authority of water distribution and water quality protection allows the Board to provide protection for the State's waters, through its nine Regional Water Quality Control Boards (RWQCBs). The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and hydrology. The RWQCBs develop "basin plans" for their hydrologic areas, issue waste discharge requirements, enforce action against stormwater discharge violators, and monitor water quality.[4]

Federal Anti-Degradation Policy

The Federal Anti-degradation Policy (40 Code of Federal Regulations 131.12) requires states to develop statewide anti-degradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state anti-degradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

California Porter-Cologne Act

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control. The California Water Code authorizes the SWRCB to implement the provisions of the Clean Water Act, including the authority

[3] A small municipal separate storm sewer system (MS4) is any MS4 not already covered by the Phase I program as a medium or large MS4. The Phase II Rule automatically covers on a nationwide basis all small MS4s located in "urbanized areas" as defined by the Bureau of the Census (unless waived by the NPDES permitting authority), and on a case-by-case basis those small MS4s located outside of urbanized areas that the NPDES permitting authority designates.

[4] USEPA. U.S. Environmental Protection Agency - Clean Water Act. http://www.epa.gov/lawsregs/laws/cwa.html

to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants.

As discussed above, under the California Water Code (CWC), the State of California is divided into nine RWQCBs, governing the implementation and enforcement of the CWC and CWA. The Project Site is located within Region 4, also known as the Los Angeles Region. Each RWQCB is required to formulate and adopt a Basin Plan for its region. This Plan must adhere to the policies set forth in the CWC and established by the SWRCB. The RWQCB is also given authority to include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

California Anti-Degradation Policy

The California Anti-degradation Policy, otherwise known as the Statement of Policy with Respect to Maintaining High Quality Water in California was adopted by the SWRCB (State Board Resolution No. 68-16) in 1968. Unlike the Federal Anti-degradation Policy, the California Anti-degradation Policy applies to all waters of the State, not just surface waters. The policy states that whenever the existing quality of a water body is better than the quality established in individual Basin Plans, such high quality shall be maintained and discharges to that water body shall not unreasonably affect present or anticipated beneficial use of such water resource.

California Toxics Rule

In 2000, the EPA promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State. The EPA promulgated this rule based on the EPA's determination that the numeric criteria are necessary in the State to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the Los Angeles Regional Water Quality Control Board (LARWQCB) as having beneficial uses protective of aquatic life or human health.

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the CWC, the LARWQCB adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.[5]

[5] Los Angeles Regional Water Quality Control Board. LARWQCB Basin Plan http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/

The Basin Plan is a resource for the RWQCB and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

NPDES Permit Program

The NPDES permit program was first established under authority of the Clean Water Act to control the discharge of pollutants from any point source into the waters of the United States. As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs.

Construction General Permit

SWRCB Order No. 2012-0006-DWQ known as "The Construction General Permit" was adopted on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the Construction General Permit are to:

1. Reduce erosion
2. Minimize or eliminate sediment in stormwater discharges
3. Prevent materials used at a construction site from contacting stormwater
4. Implement a sampling and analysis program
5. Eliminate unauthorized non-stormwater discharges from construction sites
6. Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
7. Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of Best Management Practices (BMPs) for a specific construction project, charging Owners with stormwater quality management responsibilities. A construction site subject to the Construction General Permit must prepare and implement a SWPPP that meets the requirements of the Construction General Permit.[6, 7]

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[6] State Water Resources Control Board. State Water Resources Control Board. August 2019. http://www.swrcb.ca.gov/water_issues/programs/npdes/

[7] USEPA. U.S. Environmental Protection Agency - NPDES. < https://www.epa.gov/npdes>.

Los Angeles County Municipal Storm Water System (MS4) Permit

As described above, USEPA regulations require that MS4 permittees implement a program to monitor and control pollutants being discharged to the municipal system from both industrial and commercial projects that contribute a substantial pollutant load to the MS4.

On July 31, 2021, the LARWQCB adopted Order No. R4-2021-0105 under the CWA and the Porter-Cologne Act, which became effective September 11, 2021. This Order is the NPDES permit or MS4 permit for municipal stormwater and urban runoff discharges within Los Angeles County. The requirements of this Order (the Permit) cover 85 cities and most of the unincorporated areas of Los Angeles County as well as 10 cities and unincorporated areas of Ventura County. Under the Permit, the Los Angeles County Flood Control District (LACFCD) is designated as the Principal Permittee. The other permittees are the 85 Los Angeles County cities (including the City of Los Angeles) and Los Angeles County as well as the Ventura County Watershed Protection District, the 10 Ventura County cities and Ventura County. Collectively, these are the "Co-Permittees". The Principal Permittee helps to facilitate activities necessary to comply with the requirements outlined in the Permit but is not responsible for ensuring compliance of any of the Co-Permittees.

Stormwater Quality Management Program (SQMP)

In compliance with the Los Angeles County MS4 Permit, the Co-Permittees are required to implement a stormwater quality management program (SQMP) with the goal of accomplishing the requirements of the Permit and reducing the amount of pollutants in stormwater runoff. The SWMP requires the County of Los Angeles and the 84 incorporated cities to:

- Implement a public information and participation program to conduct outreach on storm water pollution;
- Control discharges at commercial/industrial facilities through tracking, inspecting, and ensuring compliance at facilities that are critical sources of pollutants;
- Implement a development planning program for specified development projects;
- Implement a program to control construction runoff from construction activity at all construction sites within the relevant jurisdictions;
- Implement a public agency activities program to minimize storm water pollution impacts from public agency activities; and
- Implement a program to document, track, and report illicit connections and discharges to the storm drain system.

The MS4 Permit contains the following provisions for implementation of the SQMP by the Co-Permittees:

1. General Requirements:

    - Each permittee is required to implement the SQMP in order to comply with applicable stormwater program requirements.

    - The SQMP shall be implemented and each permittee shall implement additional controls so that discharge of pollutants is reduced.

2. Best Management Practice Implementation:

    - Permittees are required to implement the most effective combination of BMPs for stormwater/urban runoff pollution control. This should result in the reduction of stormwater runoff.

3. Revision of the SQMP:

    - Permittees are required to revise the SQMP in order to comply with requirements of the RWQCB while complying with regional watershed requirements and/or waste load allocations for implementation of TMDLs for impaired waterbodies.

4. Designation and Responsibilities of the Principal Permittee:

    The Los Angeles County Flood Control District is designated as the Principal Permittee who is responsible for:

    - Coordinating activities that comply with requirements outlined in the NPDES permit;

    - Coordinating activities among Permittees;

    - Providing personnel and fiscal resources for necessary updates to the SQMP;

    - Providing technical support for committees required to implement the SQMP; and

    - Implementing the Countywide Monitoring Program required under this Order and assessing the results of the monitoring program.

5. Responsibilities of Co-Permittee:

    Each co-permittee is required to comply with the requirements of the SQMP as applicable to the discharges within its geographical boundaries. These requirements include:

- Coordinating among internal departments to facilitate the implementation of the SQMP requirements in an efficient way;

- Participating in coordination with other internal agencies as necessary to successfully implement the requirements of the SQMP; and

- Preparing an annual Budget Summary of expenditures for the stormwater management program by providing an estimated breakdown of expenditures for different areas of concern, including budget projections for the following year.

6. Watershed Management Committees (WMCs):

    - Each WMC shall be comprised of a voting representative from each Permittee in the Watershed Management Area (WMA).

    - Each WMC is required to facilitate exchange of information between co-permittees, establish goals and deadlines for WMAs, prioritize pollution control measures, develop and update adequate information, and recommend appropriate revisions to the SQMP.

7. Legal Authority:

    - Co-permittees are granted the legal authority to prohibit non-stormwater discharges to the storm drain system including discharge to the MS4 from various development types.

Standard Urban Stormwater Mitigation Plan (SUSMP)

Under the Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address storm water pollution. These programs require project applicants for certain types of projects to implement Standard Urban Stormwater Mitigation Plans (SUSMP) throughout the operational life of their projects. The purpose of SUSMP is to reduce the discharge of pollutants in storm water by outlining BMPs which must be incorporated into the design plans of new development and redevelopment. A project is subject to SUSMP if it falls under one of the categories listed below:

1. Single-family hillside homes.

2. Ten or more-unit homes (including single family homes, multifamily homes, condominiums, and apartments).

3. Automotive service facilities.

4. Restaurants.

5. 100,000 or more square feet of impervious surface in industrial/commercial development.

6. Retail gasoline outlet.

7. Parking lots with 5,000 square feet or more of surface area or with 25 or more parking spaces.

8. Redevelopment projects in subject categories that meet redevelopment thresholds.

9. Located within or directly adjacent to or discharging directly to an environmentally sensitive area if the discharge is likely to impact a sensitive biological species or habitat and the development creates 2,500 square feet or more of impervious surface.

City of Los Angeles Water Quality Compliance Master Plan for Urban Runoff

On March 2, 2007, City Council Motion 07-0663 was introduced by the City of Los Angeles City Council to develop a water quality master plan with strategic directions for planning, budgeting and funding to reduce pollution from urban runoff in the City of Los Angeles. The Water Quality Compliance Master Plan for Urban Runoff was developed by the Bureau of Sanitation, Watershed Protection Division in collaboration with stakeholders to address the requirements of this Council Motion. The primary goal of the Water Quality Compliance Master Plan for Urban Runoff is to help meet water quality regulations. Implementation of the Water Quality Compliance Master Plan for Urban Runoff is intended over the next 20 to 30 years to result in cleaner neighborhoods, rivers, lakes and bays, augmented local water supply, reduced flood risk, more open space, and beaches that are safe for swimming.

The Water Quality Compliance Master Plan for Urban Runoff also supports the Mayor and Council's efforts to make Los Angeles the greenest major city in the nation.

- The Water Quality Compliance Master Plan for Urban Runoff identifies and describes the various watersheds in the City, summarizes the water quality conditions of the City's waters, identifies known sources of pollutants, describes the governing regulations for water quality, describes the BMPs that are being implemented by the City, discusses existing TMDL Implementation Plans and Watershed Management Plans. Additionally, the Water Quality Compliance Master Plan for Urban Runoff provides an implementation strategy that includes the following three initiatives to achieve water quality goals:

- Water Quality Management Initiative, which describes how Water Quality Management Plans for each of the City's watershed and TMDL-specific Implementation Plans will be developed to ensure compliance with water quality regulations.

- The Citywide Collaboration Initiative, which recognizes that urban runoff management and urban (re)development are closely linked, requiring collaborations of many City agencies. This initiative requires the development of City policies, guidelines, and ordinances for green and sustainable approaches for urban runoff management.

- The Outreach Initiative, which promotes public education and community engagement with a focus on preventing urban runoff pollution.

- The Water Quality Compliance Master Plan for Urban Runoff includes a financial plan that provides a review of current sources of revenue, estimates costs for water quality compliance, and identifies new potential sources of revenue.

City of Los Angeles Stormwater Program

The City of Los Angeles supports the policies of the Construction General Permit and the Los Angeles County NPDES permit through the *Development Best Management Practices Handbook. Part A Construction Activities*, 3rd Edition, and associated ordinances were adopted in September 2004. *Part B Planning Activities*, 5th Edition was adopted in May 2016. The Handbook provides guidance for developers in complying with the requirements of the Development Planning Program regulations of the City's Stormwater Program. Compliance with the requirements of this manual is required by City of Los Angeles Ordinance No. 173,494. The handbook and ordinances also have specific minimum BMP requirements for all construction activities and require dischargers whose construction projects disturb one acre or more of soil to prepare a SWPPP and file a Notice of Intent (NOI) with the SWRCB. The NOI informs the SWRCB of a particular project and results in the issuance of a Waste Discharger Identification (WDID) number, which is needed to demonstrate compliance with the Construction General Permit.

- The City of Los Angeles implements the requirement to incorporate stormwater BMPs through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including storm water requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address storm water pollution prevention goals.

Los Angeles Municipal Code

Section 64.70 of the LAMC sets forth the City's Stormwater and Urban Runoff Pollution Control Ordinance. The ordinance prohibits the discharge of the following into any storm drain system:

- Any liquids, solids, or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive, or radioactive, or by interaction with other materials could result in fire, explosion or injury.

- Any solid or viscous materials, which could cause obstruction to the flow or operation of the storm drain system.

- Any pollutant that injures or constitutes a hazard to human, animal, plant, or fish life, or creates a public nuisance.

- Any noxious or malodorous liquid, gas, or solid in sufficient quantity, either singly or by interaction with other materials, which creates a public nuisance, hazard to life, or inhibits authorized entry of any person into the storm drain system.

- Any medical, infectious, toxic or hazardous material or waste.

Additionally, unless otherwise permitted by a NPDES permit, the ordinance prohibits industrial and commercial developments from discharging untreated wastewater or untreated runoff into the storm drain system. Furthermore, the ordinance prohibits trash or any other abandoned objects/materials from being deposited such that they could be carried into the storm drains. Lastly, the ordinance not only makes it a crime to discharge pollutants into the storm drain system and imposes fines on violators, but also gives City public officers the authority to issue citations or arrest business owners or residents who deliberately and knowingly dump or discharge hazardous chemicals or debris into the storm drain system.

Earthwork activities, including grading, are governed by the Los Angeles Building Code, which is contained in LAMC, Chapter IX, Article 1. Specifically, Section 91.7013 includes regulations pertaining to erosion control and drainage devices, and Section 91.7014 includes general construction requirements, as well as requirements regarding flood and mudflow protection.

Low Impact Development – City of Los Angeles

In October 2011, the City of Los Angeles passed an ordinance (Ordinance No. 181,899) amending LAMC Chapter VI, Article 4.4, Sections 64.70.01 and 64.72 to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan (SUSMP) requirements by imposing rainwater Low Impact Development (LID) strategies on projects that require building permits. The LID ordinance became effective on May 12, 2012.

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where

infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.[8]

The intent of the City of Los Angeles LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce offsite runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The City of Los Angeles Bureau of Sanitation, Watershed Protection Division will adopt the LID standards as issued by the LARWQCB and the City of Los Angeles Department of Public Works. The LID Ordinance will conform to the regulations outlined in the NPDES Permit.

2.3. GROUNDWATER

Board Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

As required by the CWC, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

The Basin Plan is a resource for the Regional Board and others who use water and/or discharge wastewater in the Los Angeles Region. Other agencies and organizations involved in environmental permitting and resource management activities also use the Basin Plan. Finally, the Basin Plan provides valuable information to the public about local water quality issues.

[8] City of Los Angeles. "Development Best Management Practices Handbook." May 2016.

Safe Drinking Water Act (SDWA)

The Federal Safe Drinking Act, established in 1974, sets drinking water standards throughout the country and is administered by the USEPA. The drinking water standards established in the SDWA, as set forth in the CFR, are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143). California passed its own Safe Drinking Water Act in 1986 that authorizes the State's Department of Health Services (DHS) to protect the public from contaminants in drinking water by establishing maximum contaminants levels (MCLs), as set forth in the CCR, Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal Safe Drinking Water Act.

California Water Plan

The California Water Plan provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The California Water Plan, which is updated every five years, presents basic data and information on California's water resources including water supply evaluations and assessments of agricultural, urban, and environmental water uses to quantify the gap between water supplies and uses. The California Water Plan also identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the State's water needs.

The goal for the California Water Plan Update is to meet Water Code requirements, receive broad support among those participating in California's water planning, and be a useful document for the public, water planners throughout the state, legislators and other decision-makers.

3. ENVIRONMENTAL SETTING

3.1. SURFACE WATER HYDROLOGY

3.1.1. REGIONAL

The Project Site is located within one of the urban watersheds south of Ballona Creek. The Ballona Creek and Other Urban Watersheds, located in the western portion of the Los Angeles Basin, is bounded by the Santa Monica Mountains and the ridgeline in the Hollywood Hills on the north, the western portion of Silverlake (west of the reservoir) and Echo Park (west of Echo Park Lake), and the I-110 freeway (and the southwestern portion of downtown Los Angeles) on the east. To the south it includes the all or portions of El Segundo, Manhattan Beach, Hermosa Beach, Redondo Beach, Torrance, Palos Verdes Estates and Rancho Palos Verdes. To the west it is bounded by the Santa Monica Bay.[9] Refer to Figure 8 for Ballona Creek and Other Urban Watersheds Map.

[9] https://dpw.lacounty.gov/landing/waterResources.cfm accessed October 7, 2024.

3.1.2. ON SITE

Under existing conditions, the Project Site consists of one drainage area, which is described below and shown in Figure 2. The drainage area is determined by the drainage patterns and flow paths of stormwater that are tributary to a common point or area. Drainage from the entire site is directed via sheet flow to the southwest area of the site onto La Tijera Boulevard. The downstream inlets from the site are located on Sepulveda Boulevard and Will Rogers Street.

The Site consists of an existing asphalt parking lot, a single-story auto shop and repair garage, and a single-story fast-food restaurant. The Site is approximately 87.9% impervious. A summary of existing impervious conditions is found in Table 1 below.

Generally, the portion of the Project Site is relatively flat and slopes downward from northeast to southwest by approximately 11 feet (elevation from 138' to 149') over approximately 500 linear feet[10]. One flow path was assessed to calculate the total volumetric flow rate which can be found in Figure 4.

Figure 4 shows all the input parameters used for analyzing the existing Site. Table 1 shows the existing volumetric flow rates and volumes generated by a 50-year storm event within the proposed project boundary.

Table 1- Existing Drainage Stormwater Runoff Calculations for Project Area

Drainage Area	Area (Acres)	Percent Imperviousness (%)	Q50 (cfs) (Volumetric flow rate measured in cubic feet per second)
Entire Site	2.42	87.9	5.35

3.1.3. LOCAL

The stormwater runoff from the project sheet flows to the closest offsite underground storm drain facilities to two locations. One is located at the intersection of Sepulveda Boulevard and Drollinger Way, which is approximately 0.4 miles from the Project Site. The other one is located at the intersection of Will Rogers Street and Kittyhawk Avenue, which is approximately 0.5 miles away from the Project Site.

- **Sepulveda Boulevard:** There is a 36-inch reinforced concrete pipe (RCP) on Sepulveda Boulevard located between La Tijera Boulevard and Westchester Parkway. There is a catch basin on the east and west side of Sepulveda Boulevard that discharge to the main through 18-inch RCP laterals per plan number P-36344.

[10] The entire length of the Project Site is approximately 500 feet measured from northeast to the southwest.

These catch basins capture sheet flow from the northern part of Sepulveda Boulevard towards La Tijera Boulevard. There are two other catch basins on the northwest corner where Sepulveda Boulevard intersects Westchester Parkway. Another catch basin is located on the northeast corner of the same intersection. These structures capture sheet flow from the northern part of Sepulveda Boulevard near Howard B Drollinger Way and connect to the 60-in storm main that flows south on Sepulveda Boulevard. The estimated full-flow capacity of the 18-inch pipe is 21.17 cfs (S=0.04602 per P-36344 sheet 59), as shown on Figure 2A.

- **Will Rogers Street:** There is an 18-inch RCP storm main on the northeast area of the Will Rogers Street and Kittyhawk Avenue intersection that conveys the flow eastward from Sepulveda Boulevard towards Will Rogers Street. There are also two catch basins located on the northwest side of the Will Rogers Street and Westchester Parkway intersection, which capture sheet flow from the eastern side of Sepulveda Boulevard. Both catch basins discharge into the 24-inch RCP storm main line through an 18-inch RCP lateral per plan number D-27447. The estimated full-flow capacity of the 18-inch RCP is 4.70 cfs (S=0.00200 per D-27447 sheet 5), as shown on Figure 2B.

The underground main pipes, laterals and catch basins noted above are owned and maintained by the City of Los Angeles. Stormwater runoff from the Project Site is discharged into offsite storm drainage catch basins and underground storm drainage pipes, which convey stormwater through various underground pipe networks into Santa Monica Bay.

3.2. SURFACE WATER QUALITY

3.2.1. REGIONAL

As stated above, the Project Site lies within the Ballona Creek and Other Urban Watersheds. Constituents of concern listed for Ballona Creek, and Other Urban Watersheds under California's Clean Water Act Section 303(d) List include PCBs (Polychlorinated biphenyls), Trash, Mercury, Arsenic, and DDT (Dichlorodiphenyltrichloroethane). The listed pollutants with TMDL are PCBs (Polychlorinated biphenyls), Trash, and DDT (Dichlorodiphenyltrichloroethane).

3.2.2. LOCAL

In general, urban stormwater runoff occurs following precipitation events, with the volume of runoff flowing into the drainage system depending on the intensity and duration of the rain event. Contaminants that may be found in stormwater from developed areas include sediments, trash, bacteria, metals, nutrients, organics, and pesticides. The source of contaminants includes surface areas where precipitation falls, as well as the air through which it falls. Contaminants on surfaces such as roads, maintenance areas, parking lots, and buildings, which are usually contained in dry weather conditions, may be carried by rainfall runoff into drainage systems. The City of Los Angeles typically installs catch basins with screens to capture debris before entering the storm drain system. In addition,

the City conducts routine street cleaning operations, as well as periodic cleaning and maintenance of catch basins, to reduce stormwater pollution within the City.

3.2.3. ON-SITE

Based on the project survey by Partner Engineering and Science, Inc shown in Figure 1, site observations, and the fact that the existing site was developed prior to the enforcement of storm water quality BMP design, implementation and maintenance, it appears the Project Site currently does not implement Best Management Practices (BMPs) and has no means of treatment for stormwater runoff.

3.3. GROUNDWATER HYDROLOGY

3.3.1. REGIONAL

Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin (Basin). The Basin comprises the Hollywood, Santa Monica, Central, and West Coast Subbasins. Groundwater flow in the Basin is generally south-southwesterly and may be restricted by natural geological features. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water.

3.3.2. LOCAL

Within the Basin, the Project Site is specifically located in the West Coast Subbasin. This basin underlies 160 square miles in the southwestern part of the coastal plain of Los Angeles. The Basin is bounded on the west by Santa Monica Bay, on the north by the Ballona Escarpment, on the east by the Newport-Inglewood Uplift, and on the south by the San Pedro Bay and Palos Verdes Hills.

The Basin is replenished primarily through injection of imported and recycled water into the West Coast and Dominguez Gap Seawater intrusion barriers along the coast. In addition, underflow from the Central Basin, the easterly adjacent subbasin, and the Santa Monica Basin, the northerly adjacent subbasin, assist in its recharge. Imported water has been the largest component of supply for the basin since the mid-1950s. Water spread in the Central Basin percolates into the aquifers and, eventually, some groundwater crosses the Newport-Inglewood Uplift to replenish the groundwater in the West Coast Basin. Although the recharge water is not directly applied to the West Coast Basin, this recharge process returns large quantities of water to the Basin substantially increasing the natural subsurface flow from the Central Basin to the West Coast Basin.

The West Coast Basin Watermaster notes that precipitation over the West Coast Basin has relatively minimal direct influence over the replenishment of the groundwater in the West Coast Basin. This is a result of the low soil permeability that characterizes much of the Basin and large impermeable surfaces (i.e. pavement and buildings). However, during

years of high rainfall, increased runoff from the areas upstream of the Basin can result in increased replenishment to the Basin and decreased groundwater extraction from the Basin.[11]

3.3.3. ON-SITE

The existing Project Site consists of an asphalt parking lot and two single-story commercial buildings with a total area of approximately 105,276 square feet. There are existing 1-story and 2-story commercial building to the west and southwest, and an existing residential building to the north and south of the Project Site. There are two multi-story commercial buildings and one single-story commercial building to the east. The Project Site is bounded by South La Tijera Boulevard to the southeast. Due to the impervious condition of the Project Site, there is limited recharge potential under existing conditions.

Per the updated geotechnical report titled "Update Report 6136 Manchester Avenue 8651 South La Tijera Boulevard Westchester, California" dated July 27, 2022, currently it is proposed to develop the subject site with a new five to eight story mixed use building with two to three levels of subgrade parking based on the preliminary building plans provided by AC Martin dated July 20, 2022.[12] Excavations ranging in vertical height up to 35 feet will be required for subgrade parking excavations.[13] The subsurface exploration encountered a water seep at a depth of 35 feet in one boring. It is anticipated that due to the presence of water in only one hole of the explorations, that the encountered water is a water seep and not a static groundwater level. The depth to groundwater, when encountered in the explorations, is only valid for the date of exploration. Based on the Seismic hazard Zone Report by the California Geological Survey (formerly Division of Mines and Geology), the depth to historical high groundwater level is about 40 feet below the surface.[14] See Exhibit 3 for the Soils Report Approval Letter from City of Los Angeles Department of Building and Safety.

3.4. GROUNDWATER QUALITY

3.4.1. REGIONAL

As stated above, the City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). According to LARWQCB's Basin Plan, objectives

[11] Watermaster Service in the West Coast Los Angeles County prepared by the Water Replenishment District of Southern California (WRD) for the West Coast Basin Watermaster Water Rights Panel adopted on December 7, 2021. https://www.wrd.org/files/cd6784b5d/Watermaster+Annual+Report+2020-2021.pdf

[12] The updated building plans dated August 26, 2024 are consistent with this analysis.

[13] Update Report 6136 Manchester Avenue 8651 South La Tijera Boulevard Westchester, California dated July 27, 2022.

[14] Proposed Five to Eight Story Building with One Level of Subgrade Parking dated February 7, 2022, prepared by GeoConcepts Inc.

applying to all ground waters of the region include bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor.[15]

3.4.2. LOCAL

As stated above, the Project Site specifically overlies the Ballona Creek and Other Urban Watersheds. Based upon LARWQCB's Basin Plan, constituents of concern listed for the Ballona Creek and Other Urban Watersheds include PCBs (Polychlorinated biphenyls), Trash, Mercury, Arsenic, and DDT (Dichlorodiphenyltrichloroethane).[16]

3.4.3. ON-SITE

The entire Project is considered impervious and therefore does not contribute to groundwater recharge. Due to the imperviousness of the Project Site, it is not possible for surface water-borne contaminants to percolate into groundwater and affect groundwater quality. If the Project Site contained pervious areas, compliance with all existing hazardous waste regulations would reduce contaminant percolation. Nonetheless, groundwater quality may be impacted by past and existing activities at the Project Site.

The below discussion is based upon a review of relevant previous investigations and on-site explorations conducted as part of the Phase 1 Environmental Site Assessment Report dated November 30, 2021, by Partner Engineering and Science, Inc. Other types of risk such as underground storage tanks (USTs) have a greater potential to impact groundwater. However, based on the Phase 1 Environmental Site Assessment Report dated November 30, 2021, by Partner Engineering and Science, Inc., Partner observed three Aboveground Storage Tanks (ASTs) for the storage of waste oil, oily water and waste antifreeze on the subject property. The ASTs are located on the northwestern portion of the northern building. The tanks are equipped with secondary containment and appeared to be in good condition with *de minimis* staining. As such, these ASTs are not expected to represent a significant environmental concern at this time.[17] The ESA's findings have revealed evidence of recognized environmental conditions and/or environmental issues in connection with the subject property. Partner Engineering and Science, Inc. recommends a limited subsurface investigation should be conducted in order to determine whether the current or historical operations of the subject property and/or east-adjacent property have impacted the subsurface at the subject property. Also, Prior to the disturbance of any suspect asbestos-containing materials (ACM) or lead-based paint (LBP) at the subject property, a comprehensive survey, designed to determine if the suspect materials are

[15] Los Angeles Regional Water Quality Control Board, Basin Plan, September 11, 2014 https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html,accessed July 19, 2022.

[16] Ibid.

[17] Phase I Environmental Site Assessment Report, by Partner Engineering and Science, Inc., dated November 30, 2021.

regulated, is recommended. If such materials are identified and need to be disturbed, repaired, or removed, a licensed abatement contractor should be consulted.[18]

Partner also completed a Phase II Subsurface Investigation Report dated November 10, 2022, which investigates all recommendations form the Phase I Environmental Site Assessment Report dated November 30, 2021. The Phase II Subsurface Investigation Report states that due to the relatively low concentrations of volatile organic compounds (VOCs) detected in soil gas throughout the Site, the development plan that includes excavation and removal of soil where vapor impacts were identified, and the construction of at least one level of ventilated subterranean parking across the entire footprint of the Site, subsurface impacts do not appear to present vapor intrusion risks for the current commercial use or the proposed residential/commercial at-grade and at upper levels of the Site. Based on the results of this investigation, it's Partner's opinion that no further investigation is warranted at this time. It is anticipated that some residual soil impacts may be encountered during grading and excavation activities and a Soil Management Plan (SMP) should be prepared and implemented during earthwork activities.[19]

In the event contaminated soils are encountered during construction, or construction occurs in areas of known or potential contamination, the nature and extent of the contamination would be determined and appropriate handling, disposal, and/or treatment would be implemented in accordance with applicable regulatory requirements, including SCAQMD Rule 1166[20]. With the implementation of these recommendations, the previous impacts from the gasoline service station from the Project Site would not propose a significant impact on groundwater quality.

4. SIGNIFICANCE THRESHOLDS

In accordance with the significance thresholds described by the California Environmental Quality Act (CEQA), the Project has been analyzed for potential impacts on hydrology, water quality, and groundwater. This report includes an analysis of the Project with respect to the CEQA Appendix G thresholds as described below.

4.1. SURFACE WATER HYDROLOGY

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to surface water hydrology. These questions are as follows:

Would the project:

[18] Phase I Environmental Site Assessment Report, by Partner Engineering and Science, Inc., dated November 30, 2021.

[19] Phase II Subsurface Investigation Report by Partner Engineering and Science, Inc. dated November 10, 2022

[20] South Coast Air Quality Management District. Rules and Compliance, Rule 1166, http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1166.pdf?sfvrsn=4,.

- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems, or provide substantial additional sources of polluted runoff; or
    - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.

In the context of the above questions from the Appendix G of the CEQA Guidelines, the City of Los Angeles considers factors from the *L.A. CEQA Thresholds Guide,* which states that a project would normally have a significant impact on surface water hydrology if it would:

- Cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;
- Substantially reduce or increase the amount of surface water in a water body; or
- Result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow.

4.2. SURFACE WATER QUALITY

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to surface water quality. These questions are as follows:

Would the project:

- Violate any water quality standard or waste discharge requirements or otherwise substantially degrade surface water quality; or
- Conflict with or obstruct implementation of a water quality control plan.

In the context of the above questions from Appendix G, the City of Los Angeles considers factors from the *L.A. CEQA Thresholds Guide,* which states that a project would normally have a significant impact on surface water quality if it would result in discharges that would create pollution, contamination or nuisance, as defined in Section 13050 of the California Water Code (CWC) or that cause regulatory standards to be violated, as defined in the

applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

The CWC includes the following definitions:

- "Pollution" means an alteration of the quality of the waters of the state to a degree which unreasonably affects either of the following: 1) the waters for beneficial uses or 2) facilities which serve these beneficial uses. "Pollution" may include "Contamination".
- "Contamination" means an impairment of the quality of the waters of the state by waste to a degree, which creates a hazard to the public health through poisoning or though the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.
- "Nuisance" means anything which meets all of the following requirements: 1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; 2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and 3) occurs during, or as a result of, the treatment or disposal of wastes.[21]

4.3. GROUNDWATER HYDROLOGY

Appendix G of the CEQA Guidelines provides sample questions that address impacts with regard to groundwater. These questions are as follows:

Would the project:

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impeded sustainable groundwater management of the basin;

- Conflict with or obstruct implementation of a sustainable groundwater management plan.

In the context of the above questions from the Appendix G of the CEQA Guidelines, the City of Los Angeles considers factors from the *L.A. CEQA Thresholds Guide,* which states that a project would normally have a significant impact on groundwater hydrology if it would:

- Change potable water levels sufficiently to:

    - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported

[21] City of Los Angeles.LA. CEQA Thresholds Guide. 2006 https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/A07.pdf. Accessed October 7, 2024.

water, summer/winter peaking, or to respond to emergencies and drought;

- Reduce yields of adjacent wells or well fields (public or private); or
- Adversely change the rate or direction of flow of groundwater; or

- Result in demonstrable and sustained reduction of groundwater recharge capacity.

4.4. GROUNDWATER QUALITY

Appendix G of the CEQA Guidelines provides a set of sample questions that address impacts with regard to groundwater quality. These questions are as follows:

Would the project:

- Violate any water quality standard or waste discharge requirements or otherwise substantially degrade ground water quality; or
- Conflict with or obstruct implementation of a water quality control plan.

In the context of the above questions from the Appendix G of the CEQA Guidelines, the City of Los Angeles considers factors from the *L.A. CEQA Thresholds Guide,* which states that a project would normally have a significant impact on groundwater hydrology if it would:

- Affect the rate or change the direction of movement of existing contaminants;
- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection or saltwater intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act.

5. METHODOLOGY

5.1. SURFACE WATER HYDROLOGY

The Project Site is located within the City of Los Angeles, and drainage collection, treatment and conveyance are regulated by the City. Per the City's Special Order No. 007-1299, December 3, 1999, the City adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The LACDPW Hydrology Manual requires projects to have drainage facilities that meet the Urban Flood level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a

probability of 1/25 of being equaled or exceeded in any year. The *L.A. CEQA Thresholds Guide*, however, establishes the 50-year frequency design storm event as the criteria to analyze potential impacts on surface water hydrology as a result of development. To provide a more conservative analysis, this report analyzes the larger storm event threshold, i.e., the 50-year frequency design storm event.

Modified Rational Method was used to calculate storm water runoff. The "peak" (maximum value) runoff for a drainage area is calculated using the formula, **Q = CIA**

Where,

Q = Volumetric flow rate (cfs)

C = Runoff coefficient (dimensionless)

I = Rainfall Intensity at a given point in time (in/hr)

A = Basin area (acres)

The Modified Rational Method assumes that a steady, uniform rainfall rate will produce maximum runoff when all parts of the basin area are contributing to outflow. This occurs when the storm event lasts longer than the time of concentration. The time of concentration (Tc) is the time it takes for rain in the most hydrologically remote part of the basin area to reach the outlet.

The method assumes that the runoff coefficient (C) remains constant during a storm. The runoff coefficient is a function of both the soil characteristics and the percentage of impervious surfaces in the drainage area.

The LACDPW developed a time of concentration calculator, Hydrocalc, to automate time of concentration calculations as well as the peak runoff rates and volumes using the Modified Rational Method design criteria as outlined in the Hydrology Manual. The data input requirements include: sub-area size, soil type, land use, flow path length, flow path slope and rainfall isohyet. The Hydrocalc Calculator was used to calculate the storm water peak runoff flow rate for the Project conditions by evaluating an individual sub-area independent of all adjacent subareas. See Figure 4 for the Hydrocalc Calculator results, and Figure 7 for LA County Hydrology Data Map.

5.2. SURFACE WATER QUALITY

5.2.1. CONSTRUCTION

The methodology to determine impacts related to construction regarding surface water quality is largely based upon determination of construction BMPs. Construction BMPs will be designed and maintained as part of the implementation of the SWPPP in compliance with the Construction General Permit. The SWPPP shall begin when construction commences before any site clearing and grubbing or demolition activity. During construction, the SWPPP will be referred to regularly and amended as changes occur

throughout the construction process. The Notice of Intent (NOI), Amendments to the SWPPP, Annual Reports, Rain Event Action Plans (REAPs), and Non-Compliance Reporting will be posted to the State's SMARTS website in compliance with the requirements of the Construction General Permit. In addition, as part of the NOI application a risk level evaluation will be performed to determine the risk level category (risk level 1, 2, or 3) for the Project based on a detailed construction schedule, soil type, site slope, and location. Each of the three risk level categories establishes specific monitoring and testing requirements.

5.2.2. OPERATION

The Project will meet the requirements of the City's LID standards.[22] Under section 3.1.3. of the LID Manual, post-construction stormwater runoff from a new development must be infiltrated, captured and used, and/or treated through high efficiency BMPs onsite for at least the volume of water produced by the greater of the 85th percentile storm or the 0.75-inch storm event. The LID Manual prioritized the selection of BMPs used to comply with stormwater mitigation requirement. The order of priority is:

1. Infiltration Systems
2. Stormwater Capture and Use
3. High Efficient Biofiltration/Bioretention Systems
4. Combination of Any of the Above

Feasibility screening delineated in the LID manual is applied to determine which BMP will best suit the Project. Specifically, LID guidelines require that infiltration systems maintain at least 10 feet of clearance to the groundwater, property line, and any building structure.

Based on the Seismic hazard Zone Report by the California Geological Survey (formerly Division of Mines and Geology), the depth to historical high groundwater level is about 40 feet below the surface.[23] According to the percolation test report for the Project Site[24], an infiltration boring was excavated onsite to a depth of 38.5 feet and the infiltration testing was performed in the bottom of the test pit utilizing the Falling Head Borehole Method, which results in a measured percolation rate of 96 inches per hours at a tested depth between 20 feet to 38.5 feet.

As discussed above, the Project will implement infiltration BMPs as the proposed means of stormwater management. This report analyzes the feasibility of proposed infiltration systems at the Project site. According to the City's LID standards, the infiltration systems

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[22] Development Best Management Practices Handbook, Part B Planning Activities, 5th edition was adopted by the City of Los Angeles, Board of Public Works on May 9, 2016 to reflect Low Impact Development (LID) requirements that took effect May 12, 2012.

[23] Proposed Five to Eight Story Building with One Level Subgrade Parking dated February 7, 2022, prepared by GeoConcepts, Inc.

[24] Percolation Test Report for 6136 Manchester Avenue and 8651 South La Tijera Boulevard, Westchester, California dated July 19, 2022 prepared by GeoConcepts, Inc.

shall be sized to capture the runoff generated from the greater of the 85th percentile storm and the 0.75-inch storm event at a minimum:

Vdesign (gallons) = (85th percentile or 0.75 inch * 7.48 gallons/cubic foot) * Catchment Area (sq. ft.)

Where:

Catchment Area = (Impervious Area x 0.9) + [(Pervious Area + Undeveloped Area) x 0.1]

For catchment areas given in acres, multiply the above equation by 43,560 sq. ft./acre.

5.3. GROUNDWATER

To determine the level of significant impact of this Project, under the above threshold and as it relates to the level of the underlying groundwater table of the West Coast Subbasin Groundwater Basin, the analysis included a review of the following considerations:

Analysis and Description of the Project's Existing Condition

- Identification of the West Coast Subbasin as the underlying groundwater basin, and description of the level, quality, direction of flow, and existing uses for the water;
- Description of the location, existing uses, production capacity, quality, and other pertinent data for spreading grounds and potable water wells in the vicinity (usually within a one-mile radius);
- Area and degree of permeability of soils on the Project Site;

Analysis of the Proposed Project Impact on Groundwater Level

- Description of the rate, duration, location and quantity of extraction, dewatering, spreading, injection, or other activities;
- The projected reduction in groundwater resources and any existing wells in the vicinity (usually within a one-mile radius); and
- The projected change in local or regional groundwater flow patterns.

In addition, this report discusses the impact of both existing and proposed activities at the Project Site on the groundwater quality of the underlying West Coast Subbasin.

Short-term groundwater quality impacts could potentially occur during construction of the Project as a result of soil or shallow groundwater being exposed to construction materials, wastes, and spilled materials. These potential impacts are qualitatively assessed

6. PROJECT IMPACT ANALYSIS

6.1. CONSTRUCTION

6.1.1. SURFACE WATER HYDROLOGY

Construction activities for the Project would include demolition of the existing asphalt parking lot, excavations ranging in vertical height up to 35 feet will be required for the subgrade parking excavations per the geotechnical report.[25] The excavations would serve the subterranean parking, elevators, the mixed-used development buildings, and the hardscape and landscape surrounding the buildings. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Also, exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff.

However, as the construction site would be greater than one acre, the Project would be required to obtain coverage under the NPDES General Construction Permit. In accordance with the requirements of this permit, the Project would implement a SWPPP that specifies BMPs and erosion control measures to be used during construction to manage runoff flows and prevent pollution. BMPs would be designed to reduce runoff and pollutant levels in runoff during construction. The NPDES and SWPPP measures are designed to (and would in fact) contain and treat, as necessary, stormwater or construction watering on the Project Site so runoff does not impact off-site drainage facilities or receiving waters. Construction activities are temporary and flow directions and runoff volumes during construction will be controlled.

In addition, the Project will comply with all applicable City grading permit regulations, plans, and inspections to reduce sedimentation and erosion. Thus, through compliance with NPDES General Construction Permit requirements, implementation of BMPs, and compliance with applicable City grading regulations, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion or siltation. The Project would not result in a permanent adverse change to the movement of surface water. Therefore, construction-related impacts to surface water hydrology would be less than significant.

6.1.2. SURFACE WATER QUALITY

Construction activities such as earth moving, maintenance/operation of construction equipment, expected dewatering, and handling/storage/disposal of materials could contribute to pollutant loading in stormwater runoff. However, as previously discussed, construction contractors disturbing greater than one acre of soil would be required to obtain

[25] Update Report 6136 West Manchester Avenue 8651 South La Tijera Boulevard Westchester, California dated July 27, 2022 by GeoConcepts Inc.

coverage under the NPDES General Construction Permit (order No. 2022-0057-DWQ). In accordance with the requirements of the permit, the Project Applicant would prepare and implement a site-specific SWPPP adhering to the California Stormwater Quality Association (CASQA) BMP Handbook. The SWPPP would specify BMPs to be used during construction. BMPs would include, but not be limited to: erosion control, sediment control, non-stormwater management, and materials management BMPs. Refer to Exhibit 1 for typical SWPPP BMPs to be implemented during construction of the Project.

With implementation of the Erosion Control Plan, site-specific BMPs would reduce or eliminate the discharge of potential pollutants from stormwater runoff. In addition, the Project Applicant would be required to comply with City grading permit regulations and inspections to reduce sedimentation and erosion. Construction of the Project would not result in discharge that would cause: (1) pollution which would alter the quality of the water of the State (i.e., Santa Monica Bay) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the water of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Furthermore, construction of the Project would not result in discharges that would cause regulatory standards to be violated in the Santa Monica Bay. Therefore, temporary construction-related impacts on surface water quality would be less than significant.

6.1.3. GROUNDWATER HYDROLOGY

The Project would include demolition of the existing asphalt parking lot, excavations ranging in vertical height up to 35 feet will be required for the subgrade parking excavations per the geotechnical report dated July 27, 2022.[26]The excavations would serve the subterranean parking, elevators, the mixed-used development buildings, and the hardscape and landscape surrounding the buildings.

The subsurface exploration encountered a water seep at a depth of 35 feet in one boring. It is anticipated that due to the presence of water in only one hole of the explorations, that the encountered water is a water seep and not a static groundwater level. The depth to groundwater, when encountered in the explorations, is only valid for the date of exploration. Based on the Seismic hazard Zone Report by the California Geological Survey (formerly Division of Mines and Geology), the depth to historical high groundwater level is about 40 feet below the surface.[27] Groundwater is not expected to be encountered during construction that would require either temporary or permanent dewatering operations. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including with all relevant National Pollutant Discharge Elimination System (NPDES) requirements related

[26] Updated Report 6136 West Manchester 8651 South La Tijera Boulevard Westchester, California dated July 27, 2022 prepared by GeoConcepts Inc.

[27] Proposed Five to Eight Story Building with One Level Subgrade Parking dated February 7, 2022, prepared by GeoConcepts, Inc.

to construction and discharges from dewatering operations. Therefore, Project construction would not substantially deplete groundwater supplies in a manner that would result in a net deficit in aquifer volume or lowering of the local groundwater table and impacts related to groundwater would be less than significant.

6.1.4. GROUNDWATER QUALITY

The Project would include demolition of the existing asphalt parking lot, excavations ranging in vertical height up to 35 feet will be required for the subgrade parking excavations per the geotechnical report dated July 27, 2022.[28]; the excavations would serve the subterranean parking, elevators, the mixed-used development buildings, and the hardscape and landscape surrounding the buildings. The Project would also result in a net export of existing soil material. As discussed in section 3.4.3, any contaminated soils found would be captured within that volume of excavated material, removed from the Project Site, and deposited at an approved disposal facility in accordance with regulatory requirements. Partner observed three ASTs for the storage of waste oil, oily water and waste antifreeze on the subject property. The ASTs are located on the northwestern portion of the northern building. The tanks are equipped with secondary containment and appeared to be in good condition with *de minimis* staining. As such, these ASTs are not expected to represent a significant environmental concern at this time. See section 3.4.3 for further discussion regarding USTs onsite.

During on-site grading and building construction, hazardous materials, such as fuels, paints, solvents, and concrete additives, could be used and would require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the opportunity for hazardous materials releases into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage, and disposal of hazardous waste, would reduce the potential for the construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well. There is one active groundwater well within approximately 2.4 miles northeast of the Project Site.[29] Due to compliance with measures as listed above and the implementation of BMPs, as there are no groundwater production wells or public water supply wells within one mile of the Project Site, construction activities would not be anticipated to affect existing wells. Therefore, the Project would not result in any substantial increase in groundwater contamination through hazardous materials releases during construction and impacts on groundwater quality would be less than significant.

[28] Updated Report 6136 West Manchester 8651 South La Tijera Boulevard Westchester, California dated July 27, 2022 prepared by GeoConcepts Inc.
[29] Los Angeles County Department of Public Works, Groundwater Wells Data, http://dpw.lacounty.gov/general/wells/ accessed October 7, 2024.

6.2. OPERATION

6.2.1. SURFACE WATER HYDROLOGY

The proposed Project's percentage of impervious area will slightly increase compared to the existing conditions at the Project Site. For the purposes of the report calculations, it is assumed that the Proposed Site will be approximately 100% impervious. Specifically, the existing site, is approximately 2.42 acres and is currently developed with an existing auto shop and repair garage, a single-story fast-food restaurant, and an asphalt parking lot. The existing site contains approximately 87.9% impervious surface coverage. In the existing condition, storm water discharges from the Project Site without filtration.

Under the proposed conditions illustrated in Figure 3, the Project Site would consist of one drainage area that would drain via pipe flow to the proposed BMPs and overflow to the surrounding streets.

Table 2 shows the proposed volumetric flow rates generated by a 50-year storm event for the Site. Figure 5 shows all the input parameters used for analyzing the proposed Project Site.

Table 2 – Proposed Onsite Drainage Stormwater Runoff Calculations			
Drainage Area	Area (Acres)	Percent Imperviousness (%)	Q50 (cfs) (Volumetric flow rate measured in cubic feet per second)
Total	**2.42**	**100%**	**5.31**

Table 3 summarizes the pre- and post-Project 50-year design storm event peak flow rates from the Project Site.

Table 3 – Pre- and Post-Project 50-year frequency peak flow rates for Project Area				
Drainage Area	**Project Site Area (Acres)**	**Pre-Project Q50 (cfs)** (volumetric flow rate measured in cubic feet per second)	**Post-Project Q50 (cfs)** (volumetric flow rate measured in cubic feet per second)	**Decrease from Existing to Proposed Condition (%)**
Entire Site	2.42	5.35	5.31	0.75%

The 50-yr peak flow rate of the entire site decreases approximately 0.75%. This is due to a reduction in site flow path slope. As the percent impervious has been conservatively assumed to be 100% impervious, there are no significant impacts associated with a decrease in volumetric flowrate.

The Project would manage post-construction stormwater runoff by installing building roof drain downspouts, catch basins, and planter drains throughout the Project Site; this will collect roof and site runoff and direct stormwater away from buildings through a series of building storm drainpipes. This on-site stormwater conveyance system would serve to prevent on-site flooding of the Project Site.

Due to the implementation of on-site stormwater volume mitigation, the 50-year peak flow volume will not significantly increase for the base Project Site area. In the situation of a rainfall exceeding the 85th percentile storm, the LID system would overflow to the curb face located along either Truxton Boulevard, La Tijera Boulevard, or Manchester Avenue. This would flow via sheet flow to the next downstream stormwater inlet and ultimately discharge to Santa Monica Bay.

Consequently, the Project would not cause flooding during the 50-year developed storm event, would not create runoff which would exceed the capacity of the existing or planned drainage systems, would not substantially reduce or increase the amount of surface water in a water body, or result in a permanent adverse change to the movement of surface water.

Earthquake-induced flooding can result from the failure of dams or other water-retaining structures resulting from earthquakes. According to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas (Refer to Figure 10), the Project Site is not in a potential dam inundation area. Therefore, the risk of flooding from inundation by a seiche or dam failure is considered low.

Additionally, the Project Site is not located within a Special Flood Hazard Area (100-year floodplain), or Moderate Flood Hazard Area (500-year floodplain) identified by the Federal Emergency Management Agency (FEMA) and published in the Flood Insurance Rate Maps (FIRM).[30] The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 500-year floodplain is labeled Zone C or Zone X (unshaded). As shown on Figure 9, the Project Site is located within Zone X (unshaded) and is therefore located outside of the 100- and 500-year floodplain.[31]

6.2.2. SURFACE WATER QUALITY

Under section 3.1.3. of the LID Manual, post-construction stormwater runoff from new projects must be infiltrated, captured and used, and/or treated through high efficiency

[30] FIRMs depict the 100-year floodplain as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. FIRMs depict the 500-year floodplain as Zone B or Zone X (shaded).

[31] Based on FIRM Map Number 06037C1605F, revised on 9/26/2008. Refer to Figure 9.

BMPs onsite for the volume of water produced by the 85th percentile storm event. Consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of pre-treatment system and infiltration BMPs as established by the LID Manual. The installed BMP systems will be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. As the majority of potential contaminants are anticipated to be contained within the "first flush" 85th percentile storm event, major storms are not anticipated to cause an exceedance of regulatory standards.

Compliance with the LID requirements for the Project Site would ensure stormwater treatment with post-construction BMPs that are required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's Stormwater Program. To meet the LID requirements, it is estimated that up to 8,233 cubic feet of stormwater for the base project will need to be mitigated within the Project Site (see Figure 6 for Hydrocalc Calculations). To manage this LID design volume, the Applicant would install infiltration BMPs to the satisfaction of City of Los Angeles Bureau of Sanitation. Typical LID BMPs are illustrated in Exhibit 2. The subsurface exploration encountered a water seep at a depth of 35 feet in one boring. It is anticipated that due to the presence of water in only one hole of the explorations, that the encountered water is a water seep and not a static groundwater level. The depth to groundwater, when encountered in the explorations, is only valid for the date of exploration. Based on the Seismic Hazard Zone Report by the California Geological Survey (formerly Division of Mines and Geology), the depth to historical high groundwater level is about 40 feet below the surface. Seasonal fluctuations of groundwater levels may occur by varying amounts.[32] According to the Percolation Testing Report for 6136 Manchester Avenue and 8651 South La Tijera Boulevard dated July 19, 2022, by GeoConcepts Inc, it has been discussed that infiltration is feasible.[33]

As is typical of most urban developments, stormwater runoff from the Project Site has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project include sediment, nutrients, pesticides, metals, pathogens, and oil and grease.

The pollutants listed above are expected to, and would in fact, be mitigated through the implementation of approved LID BMPs. In addition, the implementation of the following LID BMPs would be included in Project design to manage post-construction stormwater runoff:

- Provide storm drain system stenciling and signage to discourage illegal dumping;
- Design material storage areas and loading docks within structures or enclosures to prevent leaks or spills of pollutants from entering the storm drain system and;

[32] Proposed Five to Eight Story Building with One Level Subgrade Parking dated February 7, 2022, prepared by GeoConcepts, Inc.

[33] Percolation Test Report for 6136 Manchester Avenue and 8651 South La Tijera Boulevard, Westchester, California dated July 19, 2022, prepared by GeoConcepts, Inc.

- Provide evidence of ongoing BMP maintenance as part of a legal agreement with the City of Los Angeles. Recorded covenant and agreements for BMP maintenance are part of standard building permit approval processing.

Based on the above, with implementation of BMPs such as those described above, operation of the Project would not result in discharges that would cause: (1) pollution which would alter the quality of the waters of the State (i.e., Santa Monica Bay) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Furthermore, operation of the Project would not result in discharges that would cause regulatory standards to be violated in the Santa Monica Bay. Thus, operational impacts on surface water quality would be less than significant.

6.2.3. GROUNDWATER LEVEL

The Project will develop hardscape and structures that cover the majority (100-percent) of the Project footprint with impervious surfaces. However, the Project would include the installation of LID BMPs, which would mitigate at minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event. The installed BMP systems will be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater which bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way and not result in infiltration of a large amount of rainfall, which would affect groundwater hydrology, including the direction of groundwater flow.

Based on the above, operation of the Project would result in a less than significant impact on groundwater hydrology, including groundwater levels.

6.2.4. GROUNDWATER QUALITY

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking underground storage tanks. Surface spills from the handling of hazardous materials most often involve small quantities and are cleaned up in a timely manner, thereby resulting in little threat to groundwater. Other types of risks such as leaking underground storage tanks have a greater potential to affect groundwater. As mentioned in section 3.4.3, no USTs in the Project Site areas are intended for construction. There are records of USTs associated with what is now the existing site, however, the USTs and the impacted soil in question have since been removed and disposed off-Site. Furthermore, there will be no proposed USTs that will be operated with the Project. While the development of the new Project would comply with all applicable existing regulations at the Project Site, prevention methods will be enforced so the Project will not affect or expand any potential areas of contamination, increase the level of contamination, or cause regulatory water quality standards at an existing production well to be violated, as defined

in the California Code of Regulations, Title 22, Division 4, Chapter 15[34] and the Safe Drinking Water Act. [35] Furthermore, as described above, operation of the Project would not require extraction from the groundwater supply based on the depth of excavation for the proposed uses and the depth of groundwater below the Project Site. Additionally, the Project would include the installation of LID BMPs, which would mitigate at minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event.

Operation of the Project will not require extraction from the groundwater supply. The Project does not include the installation or operation of water wells, or any extraction or recharge system that is in the vicinity of the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well or spreading ground facility. The Project does not include surface or subsurface application or introduction of potential contaminants or waste materials during construction or operation. The Project is not anticipated to result in releases or spills of contaminants that could reach a groundwater recharge area or spreading ground or otherwise reach groundwater through percolation. Additionally, the Project would include the installation of structural BMPs as a means of pretreatment prior to infiltration the first flush or equivalent of the greater between the 85th percentile storm event and the first 0.75-inch of rainfall for any storm event, which would allow for treatment of runoff generated on-site prior to discharging the streets in the public right of way.

Based on the above, operation of the Project would result in a less than significant impact on groundwater quality.

6.3. Cumulative Impact Analysis

6.3.1. Surface Water Hydrology

The geographic context for the cumulative impact analysis on surface water hydrology is the Ballona Creek and Other Urban Watersheds. In accordance with City requirements, the Project and related projects would be required to implement BMPs to manage stormwater runoff in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works reviews projects on a case-by-case basis to ensure sufficient local and regional infrastructure is available to accommodate stormwater runoff. Therefore, potential cumulative impacts associated with the Project on surface water hydrology would not be cumulatively considerable and less than significant.

6.3.2. Surface Water Quality

Future growth, including the related projects, in the Ballona Creek and Other Urban Watersheds would be subject to NPDES requirements relating to water quality for both construction and operation. The Project Site is located in a highly urbanized area, and it is

[34] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/lawbook/RWregulations_20181001.pdf, accessed October 7, 2024.
[35] https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act., accessed October 7, 2024.

anticipated that future development projects would also be subject to LID requirements. The Project would comply with all applicable laws, rules and regulations, so Project cumulative impacts to surface water quality would be less than significant.

6.3.3. GROUNDWATER HYDROLOGY

Cumulative groundwater hydrology impacts could result from the overall utilization of groundwater basins located in proximity to the Project Site and the related projects. In addition, interruptions to existing injection or supply wells or designated spreading grounds would have the potential to affect groundwater levels. Any calculation of the extent to which the related projects would extract or otherwise directly utilize groundwater would be speculative. Nonetheless, to the extent existing injection or supply wells or designated spreading grounds are located within or near the related project sites, could adversely affect local and regional groundwater hydrology, including groundwater levels. In addition, the cumulative utilization of groundwater in the region, either as a result of water extraction under the related project sites or extraction from local basins by the local water supply agency to accommodate the related projects could also adversely affect local and regional groundwater hydrology. However, as described above, no water supply wells, spreading grounds, or injection wells are located within a one-mile radius of the Project Site. In addition, Project development would not involve the temporary or permanent extraction of groundwater from the Project Site or otherwise utilize the groundwater.

Furthermore, as previously discussed, implementation of the Project would not result in a significant increase in impervious surface area. Any calculation of the extent to which the related projects would increase or decrease impervious or pervious surfaces that might affect groundwater hydrology would be speculative. In addition, as the related projects are located in a highly urbanized area, any reduction in groundwater recharge due to the overall net change in impervious area within the related project sites would be minimal in the context of the regional groundwater basin. Additionally, as infiltration systems are designed to infiltrate 85th percentile storm events or the first 0.75-inch of rainfall for any storm event, the infiltration of stormwater as a means of stormwater treatment and management within the Project Site and related project sites would not result in a cumulative effect to groundwater hydrology.

Based on the above, cumulative impacts to groundwater hydrology would be less than significant.

6.3.4. GROUNDWATER QUALITY

Future growth in the West Coast Subbasin would be subject to LA RWQCB requirements relating to groundwater quality. In addition, since the Project is located in a highly urbanized area, future land use changes or development are not likely to cause substantial changes in regional groundwater quality. As noted above, the Project does not have an adverse impact on groundwater quality. Also, it is anticipated that the Project and other future development projects would also be subject to LARWQCB requirements and implementation of measures to comply with total maximum daily loads. Therefore, since the Project does not have an adverse impact and through compliance with all applicable

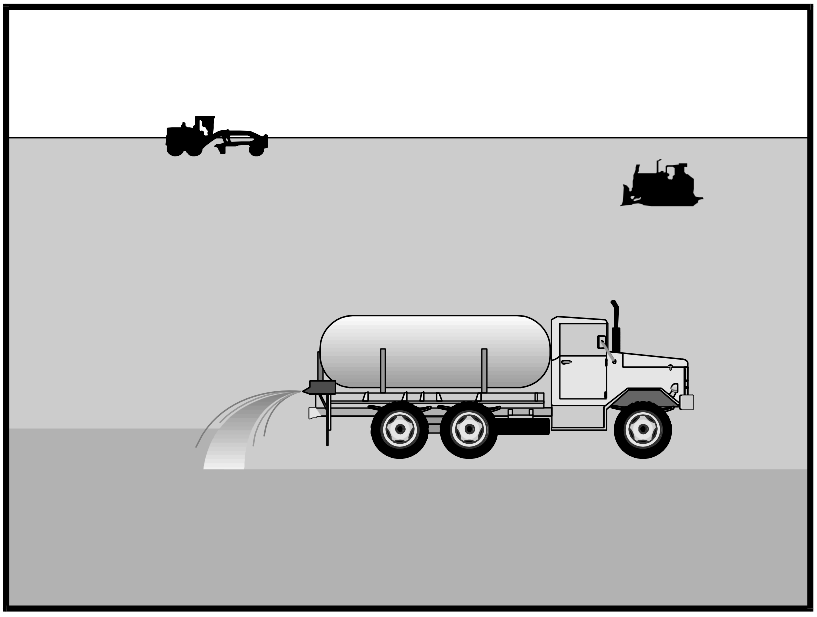
laws, rules and regulations, cumulative impacts to groundwater quality would be less than significant.

7. LEVEL OF SIGNIFICANCE

Based on the analysis contained in this report, no significant impacts have been identified for surface water hydrology, surface water quality, groundwater hydrology or groundwater quality for this Project.

APPENDICES

Soil Binders EC-5



Categories		
EC	Erosion Control	☑
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	☒
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-3 Hydraulic Mulch
EC-4 Hydroseeding
EC-6 Straw Mulch
EC-7 Geotextiles and Mats
EC-8 Wood Mulching

Description and Purpose

Soil binding consists of application and maintenance of a soil stabilizer to exposed soil surfaces. Soil binders are materials applied to the soil surface to temporarily prevent water and wind induced erosion of exposed soils on construction sites.

Suitable Applications

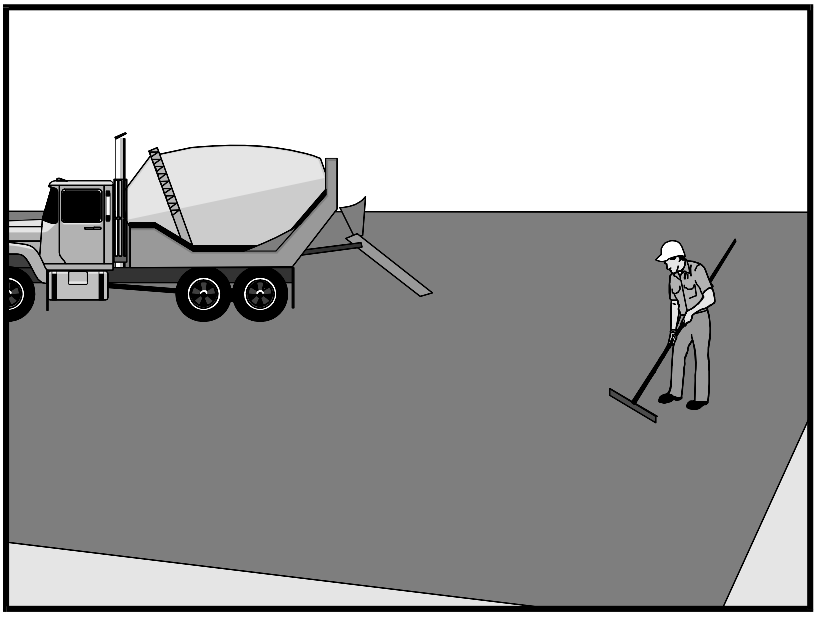
Soil binders are typically applied to disturbed areas requiring temporary protection. Because soil binders, when used as a stand-alone practice, can often be incorporated into the soil, they are a good alternative to mulches in areas where grading activities will soon resume. Soil binders are commonly used in the following areas:

- Rough graded soils that will be inactive for a short period of time
- Soil stockpiles
- Temporary haul roads prior to placement of crushed rock
- Compacted soil road base
- Construction staging, materials storage, and layout areas

Limitations

- Soil binders are temporary in nature and may need reapplication.

Paving and Grinding Operations NS-3



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	☒

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent runon and runoff pollution, properly disposing of wastes, and training employees and subcontractors.

The General Permit incorporates Numeric Effluent Limits (NEL) and Numeric Action Levels (NAL) for pH and turbidity (see Section 2 of this handbook to determine your project's risk level and if you are subject to these requirements).

Many types of construction materials associated with paving and grinding operations, including mortar, concrete, and cement and their associated wastes have basic chemical properties that can raise pH levels outside of the permitted range. Additional care should be taken when managing these materials to prevent them from coming into contact with stormwater flows, which could lead to exceedances of the General Permit requirements.

Suitable Applications

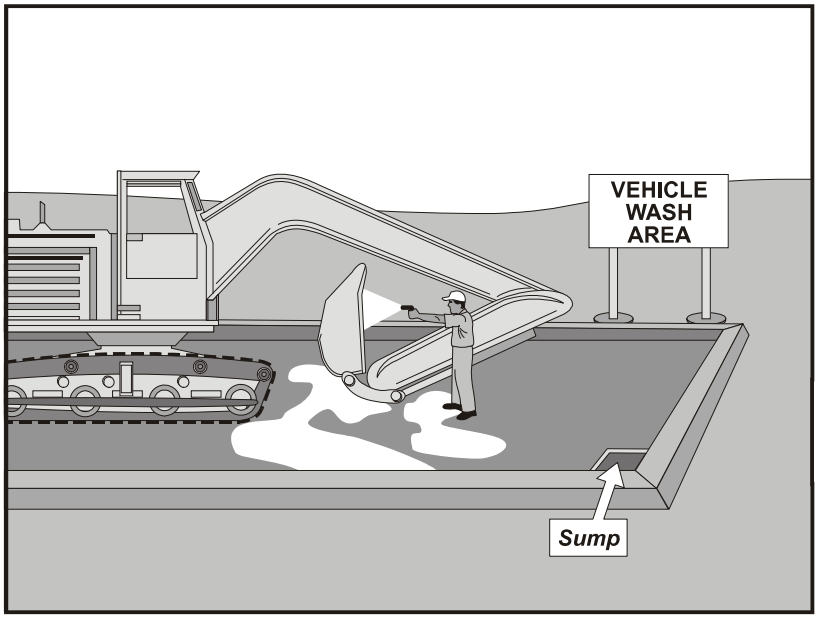
These procedures are implemented where paving, surfacing, resurfacing, or sawcutting, may pollute stormwater runoff or discharge to the storm drain system or watercourses.

Limitations

- Paving opportunities may be limited during wet weather.
- Discharges of freshly paved surfaces may raise pH to environmentally harmful levels and trigger permit violations.

CASQA
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Vehicle and Equipment Cleaning NS-8



Categories

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☑
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	
Metals	
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Vehicle and equipment cleaning procedures and practices eliminate or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning operations. Procedures and practices include but are not limited to: using offsite facilities; washing in designated, contained areas only; eliminating discharges to the storm drain by infiltrating the wash water; and training employees and subcontractors in proper cleaning procedures.

Suitable Applications

These procedures are suitable on all construction sites where vehicle and equipment cleaning is performed.

Limitations

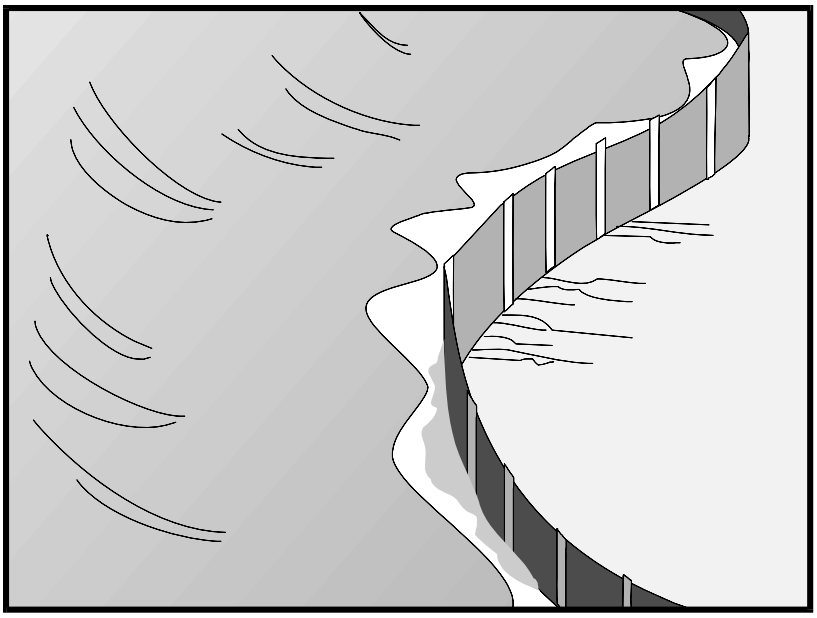
Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades. Sending vehicles/equipment offsite should be done in conjunction with TC-1, Stabilized Construction Entrance/Exit.

Implementation

Other options to washing equipment onsite include contracting with either an offsite or mobile commercial washing business. These businesses may be better equipped to handle and dispose of the wash waters properly. Performing this work offsite can also be economical by eliminating the need for a separate washing operation onsite.

If washing operations are to take place onsite, then:

Silt Fence SE-1



Categories

EC	Erosion Control	
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-10 Storm Drain Inlet Protection

SE-14 Biofilter Bags

Description and Purpose

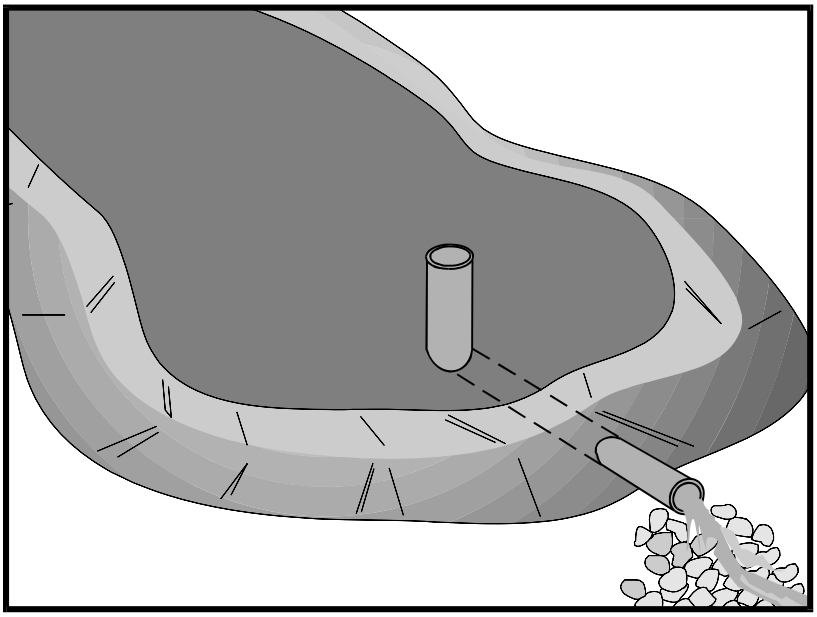
A silt fence is made of a woven geotextile that has been entrenched, attached to supporting poles, and sometimes backed by a plastic or wire mesh for support. The silt fence detains sediment-laden water, promoting sedimentation behind the fence.

Suitable Applications

Silt fences are suitable for perimeter control, placed below areas where sheet flows discharge from the site. They could also be used as interior controls below disturbed areas where runoff may occur in the form of sheet and rill erosion and around inlets within disturbed areas (SE-10). Silt fences are generally ineffective in locations where the flow is concentrated and are only applicable for sheet or overland flows. Silt fences are most effective when used in combination with erosion controls. Suitable applications include:

- Along the perimeter of a project.
- Below the toe or down slope of exposed and erodible slopes.
- Along streams and channels.
- Around temporary spoil areas and stockpiles.
- Around inlets.
- Below other small cleared areas.

Sediment Basin SE-2



Description and Purpose

A sediment basin is a temporary basin formed by excavation or by constructing an embankment so that sediment-laden runoff is temporarily detained under quiescent conditions, allowing sediment to settle out before the runoff is discharged.

Sediment basin design guidance presented in this fact sheet is intended to provide options, methods, and techniques to optimize temporary sediment basin performance and basin sediment removal. Basin design guidance provided in this fact sheet is not intended to guarantee basin effluent compliance with numeric discharge limits (numeric action levels or numeric effluent limits for turbidity). Compliance with discharge limits requires a thoughtful approach to comprehensive BMP planning, implementation, and maintenance. Therefore, optimally designed and maintained sediment basins should be used in conjunction with a comprehensive system of BMPs that includes:

- Diverting runoff from undisturbed areas away from the basin
- Erosion control practices to minimize disturbed areas on-site
  and to provide temporary stabilization and interim sediment controls (e.g., stockpile perimeter control, check dams, perimeter controls around individual lots) to reduce the basin's influent sediment concentration.

At some sites, sediment basin design enhancements may be required to adequately remove sediment. Traditional

Categories

EC	Erosion Control	
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

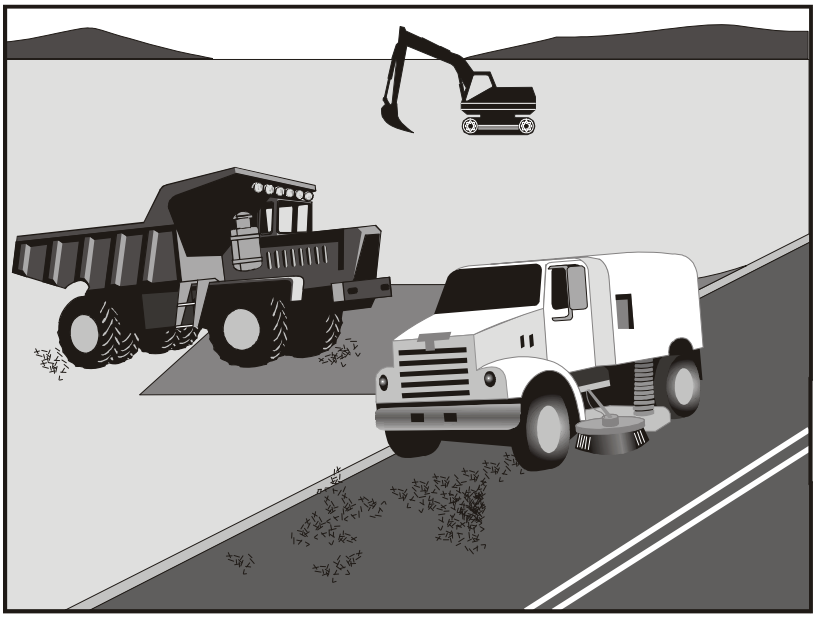
Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-3 Sediment Trap (for smaller areas)

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CALIFORNIA STORMWATER QUALITY ASSOCIATION

Street Sweeping and Vacuuming SE-7



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	☑
Organics	

Potential Alternatives

None

Description and Purpose

Street sweeping and vacuuming includes use of self-propelled and walk-behind equipment to remove sediment from streets and roadways, and to clean paved surfaces in preparation for final paving. Sweeping and vacuuming prevents sediment from the project site from entering storm drains or receiving waters.

Suitable Applications

Sweeping and vacuuming are suitable anywhere sediment is tracked from the project site onto public or private paved streets and roads, typically at points of egress. Sweeping and vacuuming are also applicable during preparation of paved surfaces for final paving.

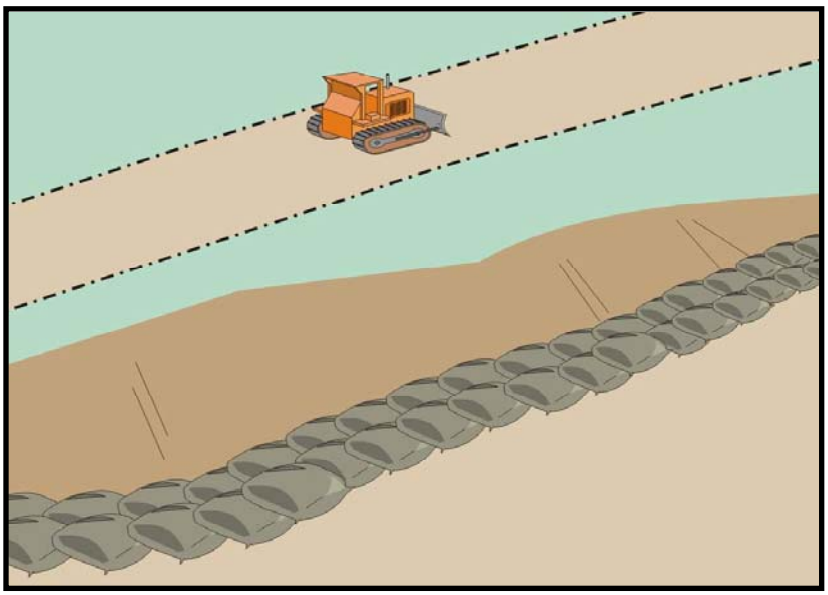
Limitations

Sweeping and vacuuming may not be effective when sediment is wet or when tracked soil is caked (caked soil may need to be scraped loose).

Implementation

- Controlling the number of points where vehicles can leave the site will allow sweeping and vacuuming efforts to be focused, and perhaps save money.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking should be swept or vacuumed on a daily basis.
- Do not use kick brooms or sweeper attachments. These tend to spread the dirt rather than remove it.

Sandbag Barrier SE-8



Categories		
EC	Erosion Control	☒
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Description and Purpose

A sandbag barrier is a series of sand-filled bags placed on a level contour to intercept or to divert sheet flows. Sandbag barriers placed on a level contour pond sheet flow runoff, allowing sediment to settle out.

Suitable Applications

Sandbag barriers may be suitable:

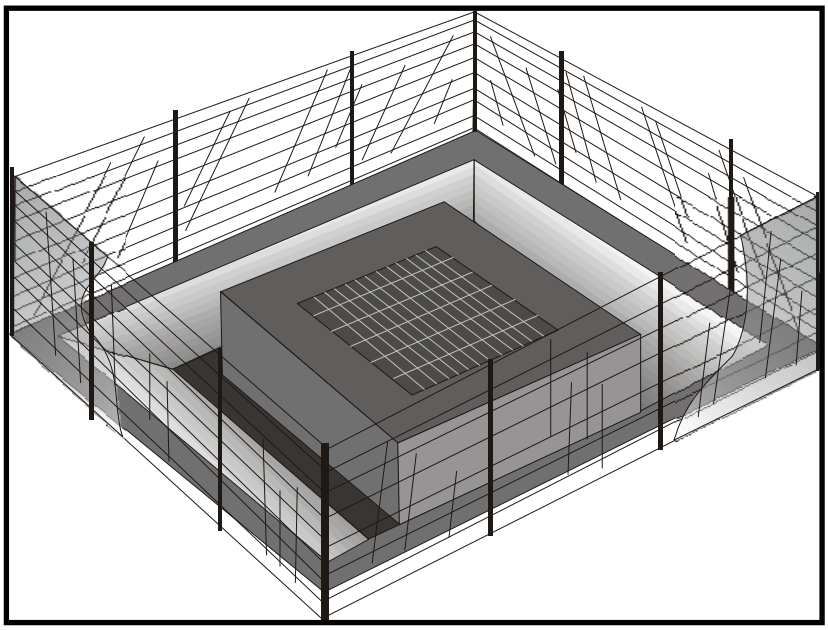
- As a linear sediment control measure:
  - Below the toe of slopes and erodible slopes.
  - As sediment traps at culvert/pipe outlets.
  - Below other small cleared areas.
  - Along the perimeter of a site.
  - Down slope of exposed soil areas.
  - Around temporary stockpiles and spoil areas.
  - Parallel to a roadway to keep sediment off paved areas.
  - Along streams and channels.
- As linear erosion control measure:
  - Along the face and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives
SE-1 Silt Fence
SE-5 Fiber Rolls
SE-6 Gravel Bag Berm
SE-14 Biofilter Bags

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Storm Drain Inlet Protection SE-10



Categories

EC	Erosion Control	
SE	Sediment Control	☑
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☒
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

Description and Purpose

Storm drain inlet protection consists of a sediment filter or an impounding area in, around or upstream of a storm drain, drop inlet, or curb inlet. Storm drain inlet protection measures temporarily pond runoff before it enters the storm drain, allowing sediment to settle. Some filter configurations also remove sediment by filtering, but usually the ponding action results in the greatest sediment reduction. Temporary geotextile storm drain inserts attach underneath storm drain grates to capture and filter storm water.

Suitable Applications

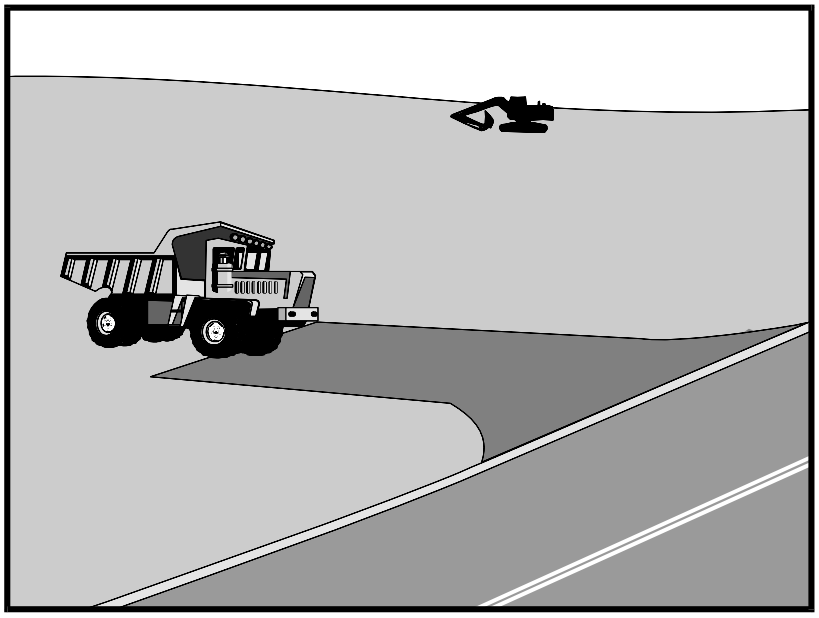
Every storm drain inlet receiving runoff from unstabilized or otherwise active work areas should be protected. Inlet protection should be used in conjunction with other erosion and sediment controls to prevent sediment-laden stormwater and non-stormwater discharges from entering the storm drain system.

Limitations

- Drainage area should not exceed 1 acre.
- In general straw bales should not be used as inlet protection.
- Requires an adequate area for water to pond without encroaching into portions of the roadway subject to traffic.

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Stabilized Construction Entrance/Exit TC-1



Categories		
EC	Erosion Control	☒
SE	Sediment Control	☒
TC	Tracking Control	☑
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Objective**
☒ **Secondary Objective**

Targeted Constituents	
Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

None

Description and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Suitable Applications

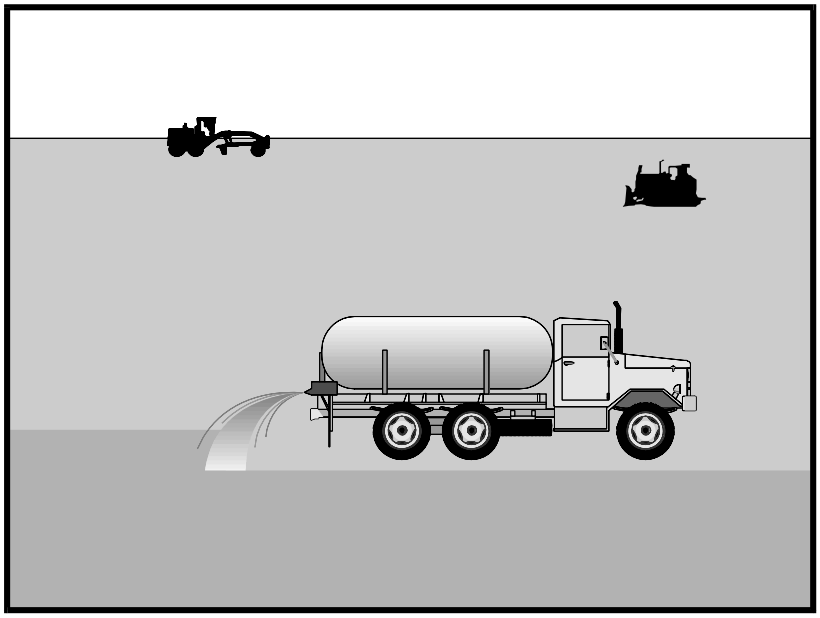
Use at construction sites:

- Where dirt or mud can be tracked onto public roads.
- Adjacent to water bodies.
- Where poor soils are encountered.
- Where dust is a problem during dry weather conditions.

Limitations

- Entrances and exits require periodic top dressing with additional stones.
- This BMP should be used in conjunction with street sweeping on adjacent public right of way.
- Entrances and exits should be constructed on level ground only.
- Stabilized construction entrances are rather expensive to construct and when a wash rack is included, a sediment trap of some kind must also be provided to collect wash water

Wind Erosion Control WE-1



Categories

EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	☑
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

EC-5 Soil Binders

Description and Purpose

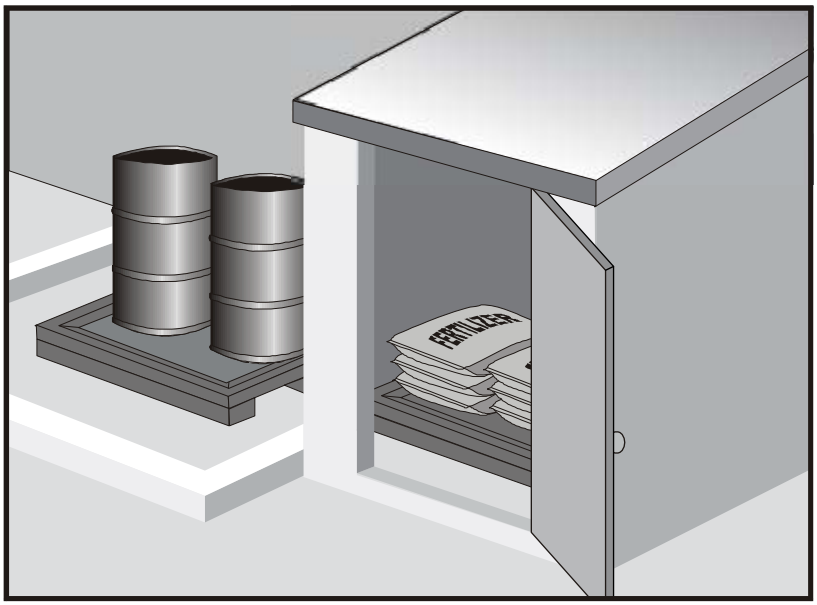
Wind erosion or dust control consists of applying water or other chemical dust suppressants as necessary to prevent or alleviate dust nuisance generated by construction activities. Covering small stockpiles or areas is an alternative to applying water or other dust palliatives.

California's Mediterranean climate, with a short "wet" season and a typically long, hot "dry" season, allows the soils to thoroughly dry out. During the dry season, construction activities are at their peak, and disturbed and exposed areas are increasingly subject to wind erosion, sediment tracking and dust generated by construction equipment. Site conditions and climate can make dust control more of an erosion problem than water based erosion. Additionally, many local agencies, including Air Quality Management Districts, require dust control and/or dust control permits in order to comply with local nuisance laws, opacity laws (visibility impairment) and the requirements of the Clean Air Act. Wind erosion control is required to be implemented at all construction sites greater than 1 acre by the General Permit.

Suitable Applications

Most BMPs that provide protection against water-based erosion will also protect against wind-based erosion and dust control requirements required by other agencies will generally meet wind erosion control requirements for water quality protection. Wind erosion control BMPs are suitable during the following construction activities:

Material Delivery and Storage WM-1



Categories		
EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Prevent, reduce, or eliminate the discharge of pollutants from material delivery and storage to the stormwater system or watercourses by minimizing the storage of hazardous materials onsite, storing materials in watertight containers and/or a completely enclosed designated area, installing secondary containment, conducting regular inspections, and training employees and subcontractors.

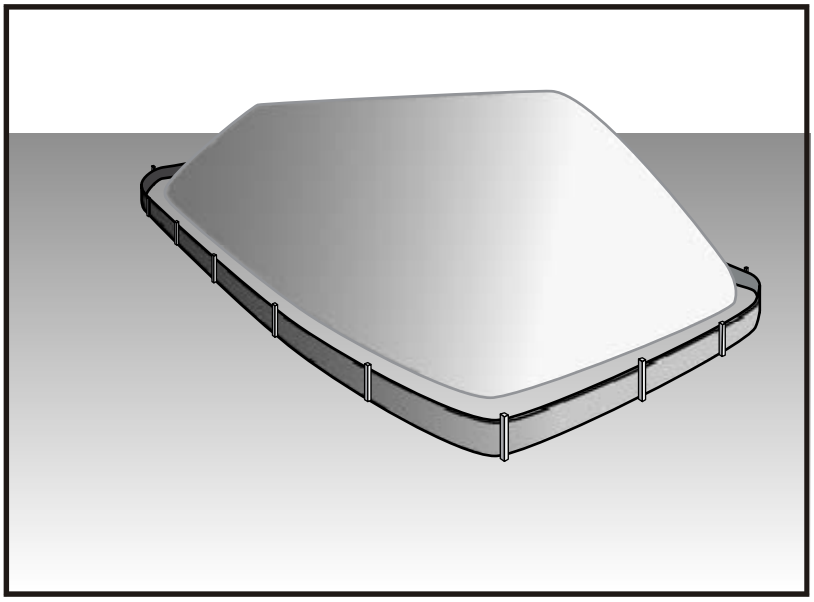
This best management practice covers only material delivery and storage. For other information on materials, see WM-2, Material Use, or WM-4, Spill Prevention and Control. For information on wastes, see the waste management BMPs in this section.

Suitable Applications

These procedures are suitable for use at all construction sites with delivery and storage of the following materials:

- Soil stabilizers and binders
- Pesticides and herbicides
- Fertilizers
- Detergents
- Plaster
- Petroleum products such as fuel, oil, and grease

Stockpile Management WM-3



Categories		
EC	Erosion Control	
SE	Sediment Control	☒
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	☒
WM	Waste Management and Materials Pollution Control	☑

Legend:
☑ **Primary Category**
☒ **Secondary Category**

Targeted Constituents	
Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	
Oil and Grease	☑
Organics	☑

Potential Alternatives

None

Description and Purpose

Stockpile management procedures and practices are designed to reduce or eliminate air and stormwater pollution from stockpiles of soil, soil amendments, sand, paving materials such as portland cement concrete (PCC) rubble, asphalt concrete (AC), asphalt concrete rubble, aggregate base, aggregate sub base or pre-mixed aggregate, asphalt minder (so called "cold mix" asphalt), and pressure treated wood.

Suitable Applications

Implement in all projects that stockpile soil and other loose materials.

Limitations

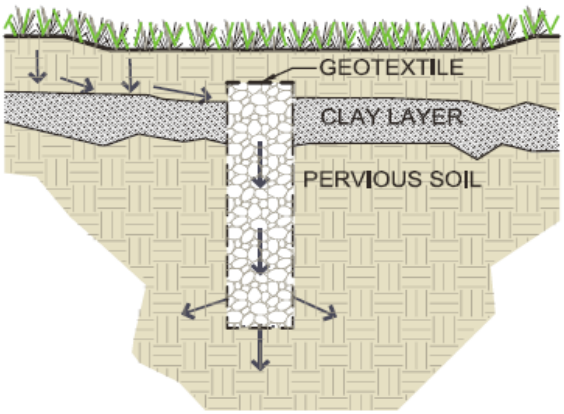
- Plastic sheeting as a stockpile protection is temporary and hard to manage in windy conditions. Where plastic is used, consider use of plastic tarps with nylon reinforcement which may be more durable than standard sheeting.
- Plastic sheeting can increase runoff volume due to lack of infiltration and potentially cause perimeter control failure.
- Plastic sheeting breaks down faster in sunlight.
- The use of Plastic materials and photodegradable plastics should be avoided.

Implementation

Protection of stockpiles is a year-round requirement. To properly manage stockpiles:

Dry Wells

A dry well is defined as an excavated, bored, drilled, or driven shaft or hole whose depth is greater than its width. Drywells are similar to infiltration trenches in their design and function, as they are designed to temporarily store and infiltrate runoff, primarily from rooftops or other impervious areas with low pollutant loading. A dry well may be either a drilled borehole filled with aggregate or a prefabricated storage chamber or pipe segment.



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SUPERINTENDENT OF BUILDING

JOHN WEIGHT
EXECUTIVE OFFICER

SOILS REPORT APPROVAL LETTER

February 3, 2023

LOG # 124730
SOILS/GEOLOGY FILE - 2

CV 6136 Manchester, LLC
1901 Avenue of the Stars
Los Angeles, CA 90067

TRACT: RANCHO SAUSAL REDONDO (PAT 1-507/508 SEC 31 T2S R14W)
LOT(S): LT 38 (Arb 65)
LOCATION: 6136 W. Manchester Ave. (aka 8651 S. La Tijera Blvd.)

CURRENT REFERENCE REPORT/LETTER(S)	REPORT No.	DATE OF DOCUMENT	PREPARED BY
Update Report	6058	07/27/2022	GeoConcepts, Inc.
Oversized Doc(s).	``	``	``
Infiltration Report	6058	07/19/2022	GeoConcepts, Inc.
Soils Report	6058	02/07/2022	GeoConcepts, Inc.
Oversized Doc(s).	``	``	``

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that provide recommendations for the proposed five to eight story mixed use building with two or three levels of subgrade parking as shown on the plan and cross sections provided in the report dated 07/27/2022. The site exploration consisted of seven borings excavated to a maximum depth of 41 feet. The earth materials at the subsurface exploration locations consist of up to one feet of uncertified fill underlain by native soils. The consultants recommend to support the proposed structure(s) on conventional foundations bearing on native undisturbed soils.

The subsurface exploration encountered groundwater at a depth of 35 feet, and the depth to historical high groundwater level is about 40 feet below the surface, according to the consultants.

As of January 1, 2023, the City of Los Angeles has adopted the new 2023 Los Angeles Building Code (LABC). The 2023 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2023.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis ( ) refer to applicable sections of the 2023 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. In the event the basement grade is to be established below the current groundwater level or historically highest groundwater level (whichever is higher), a supplemental report including

design recommendations and calculations for the proposed structure to resist uplift and hydrostatic pressures shall be submitted to the Department for review.

2. Infiltration is not approved in this letter. In the event, an on-site infiltration system is proposed, provide a supplemental report in accordance with the requirements of the Information Bulletin P/BC 2020-118 to address the Update Report dated 07/27/2022.

3. Provide a notarized letter from all adjoining property owners allowing temporary tie-back anchors on their property (7006.6).

4. The soils engineer shall review and approve the detailed plans prior to issuance of any permit. This approval shall be by signature on the plans that clearly indicates the soils engineer has reviewed the plans prepared by the design engineer; and, that the plans included the recommendations contained in their reports (7006.1).

5. All recommendations of the report(s) that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.

6. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.

7. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).

8. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.

9. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).

10. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).

11. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

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12. All loose foundation excavation material shall be removed prior to commencement of framing (7005.3).

13. Controlled Low Strength Material, CLSM (slurry) proposed to be used for backfill shall satisfy the requirements specified in P/BC 2020-121.

14. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).

15. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring. Note: Lateral support shall be considered to be removed

when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)

16. Where any excavation, not addressed in the approved reports, would remove lateral support (as defined in 3307.3.1) from a public way, adjacent property or structures, a supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction. Report shall include a plot plan and cross-section(s) showing the construction type, number of stories, and location of adjacent structures, and analysis incorporating all surcharge loads that demonstrate an acceptable factor of safety against failure. (7006.2 & 3307.3.2)

17. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).

18. The soils engineer shall review and approve the shoring plans prior to issuance of the permit (3307.3.2).

19. Prior to the issuance of the permits, the soils engineer and the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.

20. Unsurcharged temporary excavations over 5 feet exposing soil shall be trimmed back at a gradient not exceeding 1:1, as recommended.

21. Shoring shall be designed for the lateral earth pressures specified in the section titled "Excavations" starting on page 1 of the 07/27/2022 report; all surcharge loads shall be included into the design.

22. Shoring shall be designed for a maximum lateral deflection of ½ inch where a structure is within a 1:1 plane projected up from the base of the excavation, and for a maximum lateral deflection of 1 inch provided there are no structures within a 1:1 plane projected up from the base of the excavation, as recommended.

23. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.

24. In the event shoring soldier beams/piles are installed using vibrating/driving equipment in the vicinity of existing structures, the following conditions shall be complied with:

    a. Ground vibrations shall be monitored during pile shoring installation adjacent to the pile driving operation.

    b. Peak particle velocities (PPV) for any single axis shall be limited to ½ inch/second.

    c. Settlement monitoring monuments shall be surveyed as recommended on page 3 of the 07/27/2022 report.

    d. In the event any PPV is measured above the specified threshold (½ inch/second) or any settlement is measured/detected, pile driving shall be stopped and corrective actions shall be submitted to the Department for review before resuming pile driving.

25. In the event predrilling is needed for shoring pile installation:

    a. The diameter of the predrilled holes shall not exceed 75 percent of the depth of the web of the I-beam.

    b. The depth of the predrilled holes shall not exceed the planned excavation depth.

    c. The auger shall be backspun out of the pilot holes, leaving the soils in place.

26. All foundations shall derive entire support from native undisturbed soils, as recommended and approved by the soils engineer by inspection.

27. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (#5) deformed reinforcing bars, as recommended. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.

28. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2017-116 "Foundation Design for Expansive Soils" (1803.5.3).

29. Slabs placed on approved compacted fill shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

30. Concrete floor slabs placed on expansive soil shall be placed on a 4-inch fill of coarse aggregate or on a moisture barrier membrane. The slabs shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.

31. The seismic design shall be based on a Site Class D, as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check. According to ASCE 7-16 Section 11.4.8, for structures on Site Class D sites with S1 greater than or equal to 0.2, the parameter SM1 determined by EQ. (11.4-2) shall be increased by 50%. Alternatively, a supplemental report containing a site-specific ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 shall be submitted for review and approval.

32. Retaining walls shall be designed for the lateral earth pressures specified in the section titled "Retaining Walls" starting on page 5 of the 07/27/2022 report. Note: All surcharge loads shall be included into the design.

33. Retaining walls/basement walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on page 7 of the 07/27/2022 report (1803.5.12)

    Note: Lateral earth pressure due to earthquake motions shall be in addition to static lateral earth pressures and other surcharge pressures.

34. Basement walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure as specified on page 5 of the 07/27/2022 report (1610.1). All surcharge loads shall be included into the design.

35. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).

36. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).

37. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).

38. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).

39. The use of acceptable prefabricated drainage composites (also known as geosynthetic subdrain systems), as an alternative to traditionally accepted methods of draining retained earth, shall be determined during structural plan check.

40. Where the ground water table is lowered and maintained at an elevation not less than 6 inches below the bottom of the lowest floor, or where hydrostatic pressures will not occur, the floor and basement walls shall be damp-proofed. Where a hydrostatic pressure condition exists, and the design does not include a ground-water control system, basement walls and floors shall be waterproofed. (1803.5.4, 1805.1.3, 1805.2, 1805.3)

41. The structure shall be connected to the public sewer system per P/BC 2020-027.

42. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).

43. Prior to issuance of a permit involving de-watering, clearance shall be obtained from the Department of Public Works and from the California Regional Water Quality Control Board.

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44. The soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008, 1705.6 & 1705.8).

45. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)

46. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; protection fences; and, dust and traffic control will be scheduled (108.9.1).

47. Installation of shoring shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6, 1705.8).

48. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. Research Report #23835

49. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil

report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).

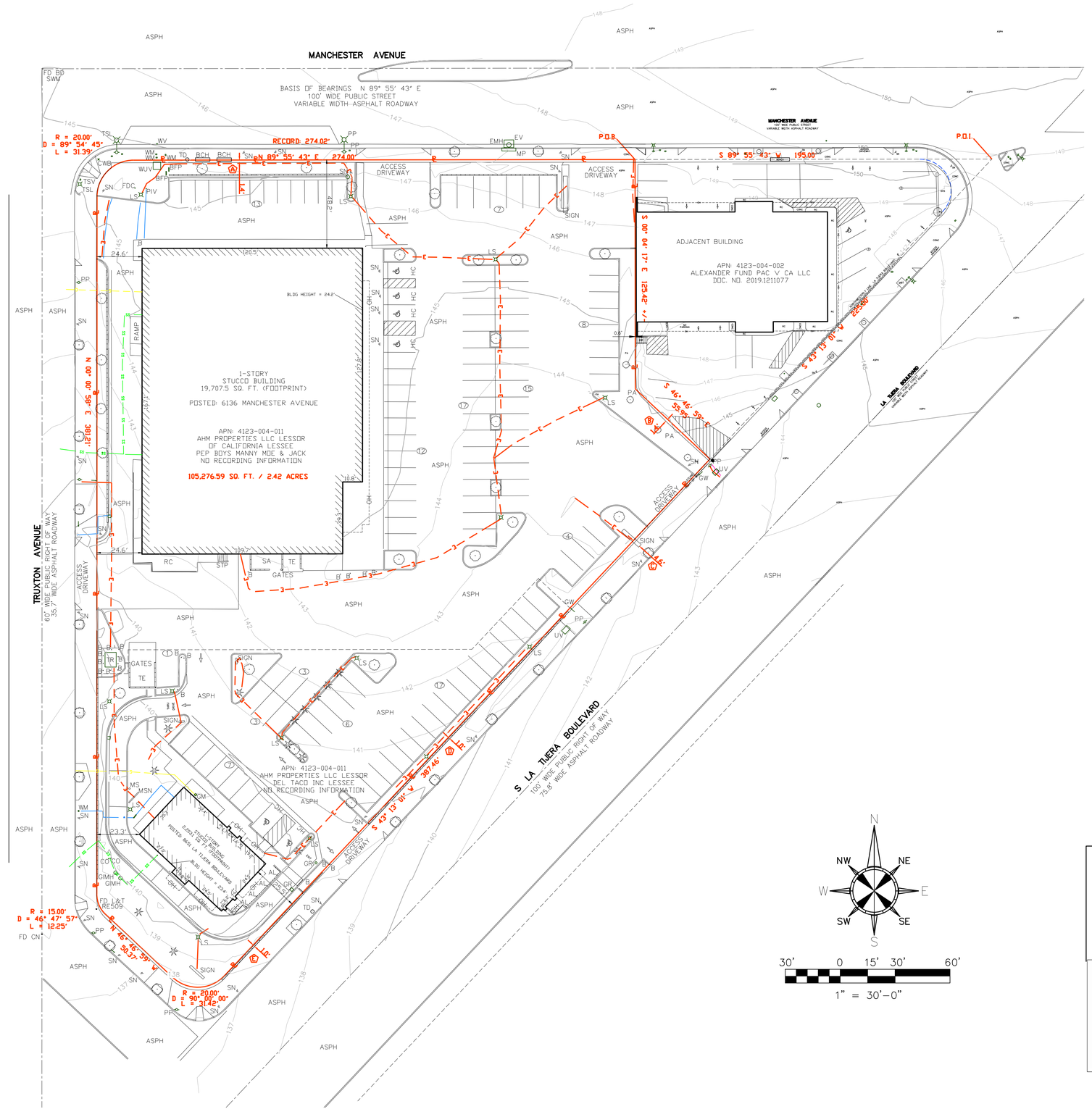
50. No footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

LEILA ETAAT
Structural Engineering Associate II

LE/le
Log No. 124730
213-482-0480

cc: GeoConcepts, Inc., Project Consultant
WL District Office

FIGURE 1- Project Survey



LEGEND

	AL	AREA LIGHT
	APN	ASSESSOR'S PARCEL NUMBER
	ASPH	ASPHALT
○	B	BOLLARD
	BD	BRASS DISK
▭	BCH	BENCH
▭	BFP	BACK FLOW VALVE
	CN	C NAIL
○	CO	CLEAN OUT
⊠	CWB	CROSSWALK BUTTON
	D	DELTA ANGLE OF CURVE
	DOC.	DOCUMENT
◯	EMH	ELECTRIC UTILITY MANHOLE
▭	EV	ELECTRIC UTILITY VAULT
●	FD	FOUND MONUMENT - AS NOTED
◯	GIMH	GREASE INTERCEPTOR MANHOLE
▣	GM	GAS METER
▭	GR	GRATE
⟶	GW	GUY WIRE
	HC	HANDICAP
	L	LENGTH OF CURVE
	L&T	LEAD AND TAG
⊠ OR ⊠	LS	LIGHT STANDARD
▭	MP	METAL PLATE
▭	MS	MENU SPEAKER
▭	MSN	MENU SIGN
▭	OH	OVERHANG
▭	P.O.B.	POINT OF BEGINNING
	P.O.I.	POINT OF INTERSECTION
	PL	PROPERTY LINE
	PP	POWER PLE
	R	RADIUS OF CURVE
	RC	RAISED CONCRETE
	SA	STORAGE AREA
⊢	SN	SIGN
▽	SQ. FT.	SQUARE FEET
	STP	STEPS
◯	TD	TRASH DISPENSER
	TE	TRASH ENCLOSURE
	TR	TRANSFORMER
⊠ OR ⊠	TSL	TRAFFIC SIGNAL LIGHT
▭	TSV	TRAFFIC SIGNAL VAULT
▭	UV	UTILITY VAULT
▭	WM	WATER METER
▭	WUV	WATER UTILITY VAULT
○	WV	WATER VALVE
		BLOCK WALL - TYPICAL
⬭		PARKING SPACE COUNTER
-o-o-		FENCE - WROUGHT IRON
98		CONTOUR LINES
		USA - GAS
		USA - ELECTRIC
		USA - SEWER
		USA - WATER
		TREE - DECIDUOUS
		TREE - PALM

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FIGURE 2- Existing Site Drainage

Legend

Description Area

TOTAL AREA (AC): 2.42
% IMPERVIOUS: 87.9%



LEGEND

	AL	AREA LIGHT
	APN	ASSESSOR'S PARCEL NUMBER
	ASPH	ASPHALT
○	B	BOLLARD
	BD	BRASS DISK
▭	BCH	BENCH
▭	BFP	BACK FLOW VALVE
	CN	C NAIL
○	CO	CLEAN OUT
⋇	CWB	CROSSWALK BUTTON
	D	DELTA ANGLE OF CURVE
	DOC.	DOCUMENT
◯	EMH	ELECTRIC UTILITY MANHOLE
▭	EV	ELECTRIC UTILITY VAULT
●	FD	FOUND MONUMENT - AS NOTED
◯	GIMH	GREASE INTERCEPTOR MANHOLE
▣	GM	GAS METER
▭	GR	GRATE
⟶	GW	GUY WIRE
	HC	HANDICAP
	L	LENGTH OF CURVE
	L&T	LEAD AND TAG
⋈ OR ⋈	LS	LIGHT STANDARD
▭	MP	METAL PLATE
▭	MS	MENU SPEAKER
▭	MSN	MENU SIGN
▭	OH	OVERHANG
▭	P.O.B.	POINT OF BEGINNING
	P.O.I.	POINT OF INTERSECTION
	PL	PROPERTY LINE
	PP	POWER PLE
	R	RADIUS OF CURVE
	RC	RAISED CONCRETE
	SA	STORAGE AREA
⊢	SN	SIGN
▽	SQ. FT.	SQUARE FEET
	STP	STEPS
◯	TD	TRASH DISPENSER
	TE	TRASH ENCLOSURE
	TR	TRANSFORMER
⋈ OR ⋈	TSL	TRAFFIC SIGNAL LIGHT
▭	TSV	TRAFFIC SIGNAL VAULT
▭	UV	UTILITY VAULT
▭	WM	WATER METER
▭	WUV	WATER UTILITY VAULT
○	WV	WATER VALVE
		BLOCK WALL - TYPICAL
		PARKING SPACE COUNTER
⊸⊸⊸		FENCE - WROUGHT IRON
98		CONTOUR LINES
		USA - GAS
		USA - ELECTRIC
		USA - SEWER
		USA - WATER
		TREE - DECIDUOUS
		TREE - PALM

N
NW NE
W E
SW SE
S

30' 0 15' 30' 60'
1" = 30'-0"

CORPORATE OFFICE
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TORRANCE, CA 90501 888-213-7479
ALTA@partneresi.com

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FIGURE 2A- FlowMaster Calculations for Sepulveda Blvd - 18 Inch Lateral (1/2)

Sepulveda Blvd 18-Inch Pipe

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.04062	ft/ft
Diameter	18.00	in
Discharge	5.35	ft³/s

Results

Normal Depth	6.17	in
Flow Area	0.54	ft²
Wetted Perimeter	1.88	ft
Hydraulic Radius	3.43	in
Top Width	1.42	ft
Critical Depth	0.89	ft
Percent Full	34.3	%
Critical Slope	0.00592	ft/ft
Velocity	9.99	ft/s
Velocity Head	1.55	ft
Specific Energy	2.06	ft
Froude Number	2.87	
Maximum Discharge	22.77	ft³/s
Discharge Full	21.17	ft³/s
Slope Full	0.00259	ft/ft
Flow Type	SuperCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	34.27	%
Downstream Velocity	Infinity	ft/s

FIGURE 2A- FlowMaster Calculations for Sepulveda Blvd - 18 Inch Lateral (2/2)

Sepulveda Blvd 18-Inch Pipe

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	6.17	in
Critical Depth	0.89	ft
Channel Slope	0.04062	ft/ft
Critical Slope	0.00592	ft/ft

FIGURE 2B- FlowMaster Calculations for Will Rogers St - 18 Inch Lateral (1/2)

Will Rogers St 18-Inch Pipe

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Roughness Coefficient	0.013	
Channel Slope	0.00200	ft/ft
Diameter	18.00	in
Discharge	3.44	ft³/s

Results

Normal Depth	11.44	in
Flow Area	1.18	ft²
Wetted Perimeter	2.77	ft
Hydraulic Radius	5.14	in
Top Width	1.44	ft
Critical Depth	0.71	ft
Percent Full	63.5	%
Critical Slope	0.00524	ft/ft
Velocity	2.90	ft/s
Velocity Head	0.13	ft
Specific Energy	1.08	ft
Froude Number	0.57	
Maximum Discharge	5.05	ft³/s
Discharge Full	4.70	ft³/s
Slope Full	0.00107	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	in
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	in
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%
Normal Depth Over Rise	63.54	%
Downstream Velocity	Infinity	ft/s

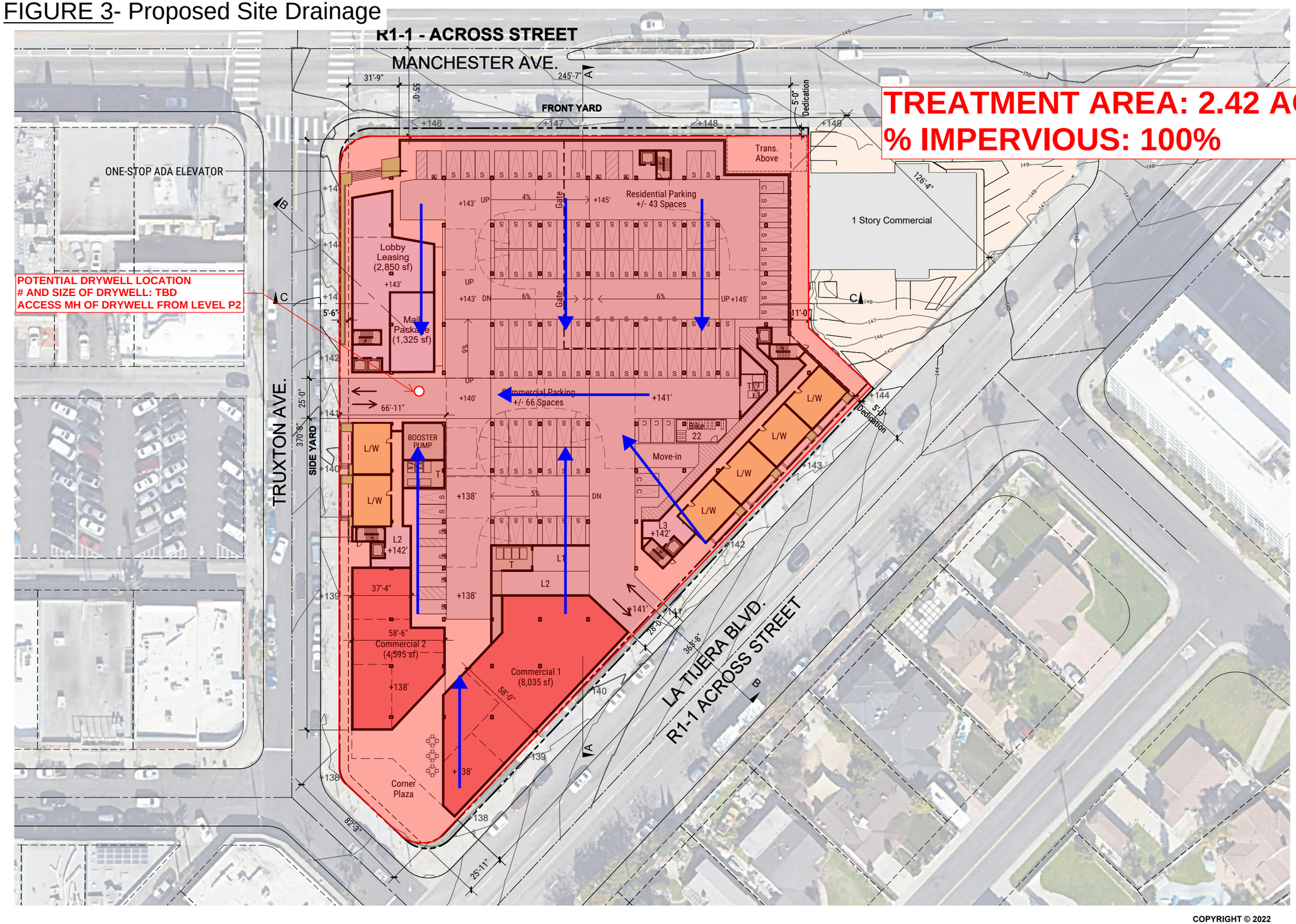
FIGURE 2B- FlowMaster Calculations for Will Rogers St - 18 Inch Lateral (2/2)

Will Rogers St 18-Inch Pipe

GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	11.44	in
Critical Depth	0.71	ft
Channel Slope	0.00200	ft/ft
Critical Slope	0.00524	ft/ft

FIGURE 3- Proposed Site Drainage



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FIGURE 4- Hydro-Calc Hydrology Results for Existing Site

Peak Flow Hydrologic Analysis

File location: P:/2022/2200453 6136 W Manchester Ave/2 ENGR/STORM/LID/50YR HYDROCALC - ENTIRE SITE.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	6136 W MANCHESTER
Subarea ID	ENTIRE SITE
Area (ac)	2.42
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.022
50-yr Rainfall Depth (in)	5.1
Percent Impervious	0.879
Soil Type	10
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.1
Peak Intensity (in/hr)	2.5977
Undeveloped Runoff Coefficient (Cu)	0.496
Developed Runoff Coefficient (Cd)	0.8511
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	5.3506
Burned Peak Flow Rate (cfs)	5.3506
24-Hr Clear Runoff Volume (ac-ft)	0.8223
24-Hr Clear Runoff Volume (cu-ft)	35819.3597

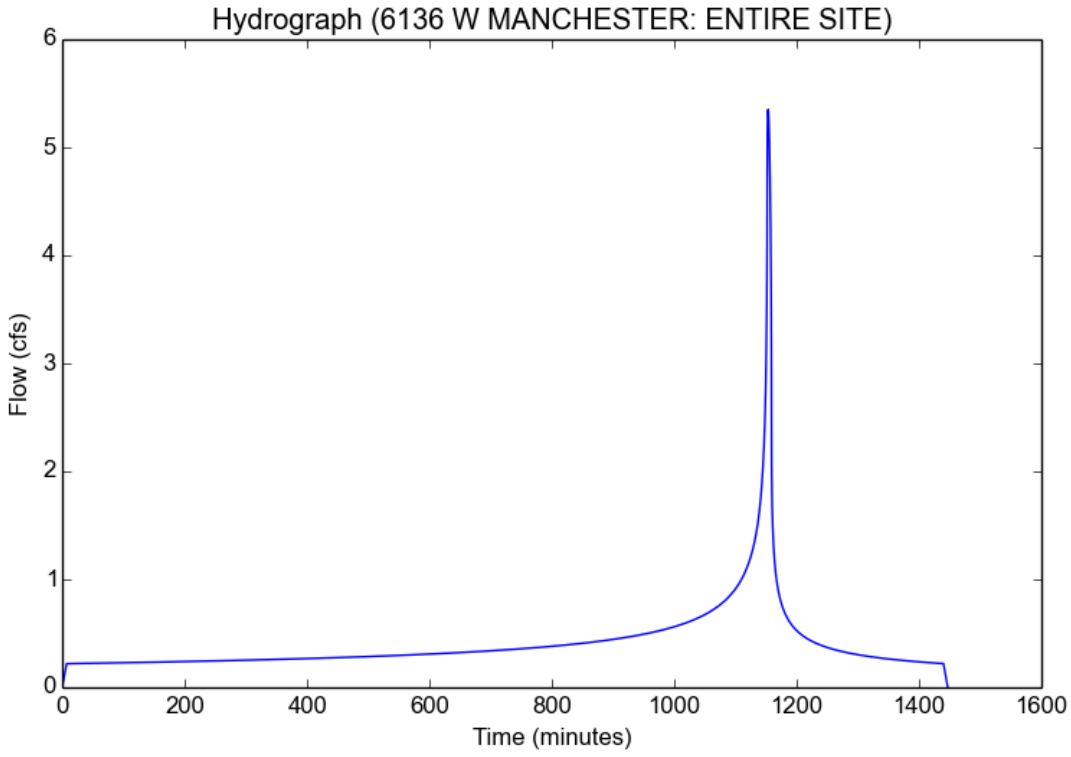


FIGURE 5- Hydro-Calc Hydrology Results for Proposed Site

Peak Flow Hydrologic Analysis

File location: P:/2022/2200453 6136 W Manchester Ave/2 ENGR/EIR/Water Resources/Figures/50YR Proposed Site Hydrocalc.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	6136 W Manchester
Subarea ID	Proposed Site
Area (ac)	2.42
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.1
Percent Impervious	1.0
Soil Type	10
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.1
Peak Intensity (in/hr)	2.4397
Undeveloped Runoff Coefficient (Cu)	0.4714
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	5.3137
Burned Peak Flow Rate (cfs)	5.3137
24-Hr Clear Runoff Volume (ac-ft)	0.918
24-Hr Clear Runoff Volume (cu-ft)	39988.1122

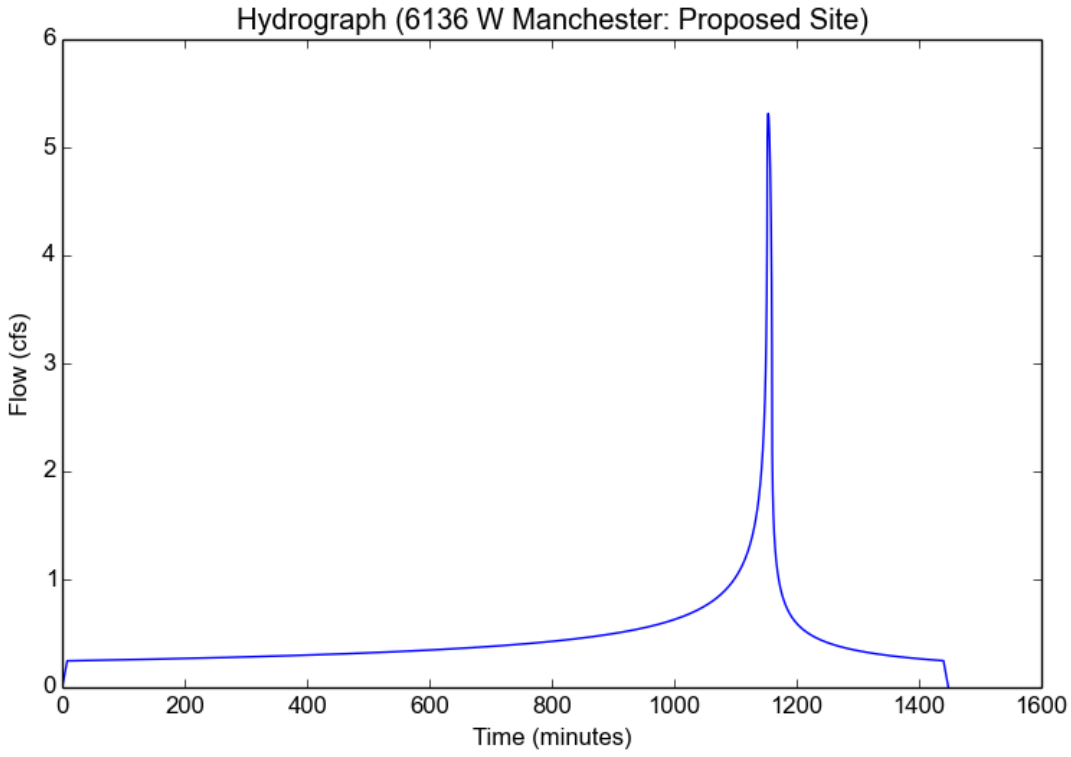


FIGURE 6- Hydrologic Analysis for Proposed LID Design Volume

Peak Flow Hydrologic Analysis

File location: P:/2022/2200453 6136 W Manchester Ave/2 ENGR/STORM/LID/Proposed Site-85th Percentile-Hydrocalc.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	6136 W Manchester
Subarea ID	Proposed Site-85th Percentile
Area (ac)	2.42
Flow Path Length (ft)	500.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.05
Percent Impervious	1.0
Soil Type	10
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.05
Peak Intensity (in/hr)	0.3265
Undeveloped Runoff Coefficient (Cu)	0.1
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	20.0
Clear Peak Flow Rate (cfs)	0.7112
Burned Peak Flow Rate (cfs)	0.7112
24-Hr Clear Runoff Volume (ac-ft)	0.189
24-Hr Clear Runoff Volume (cu-ft)	8232.8817

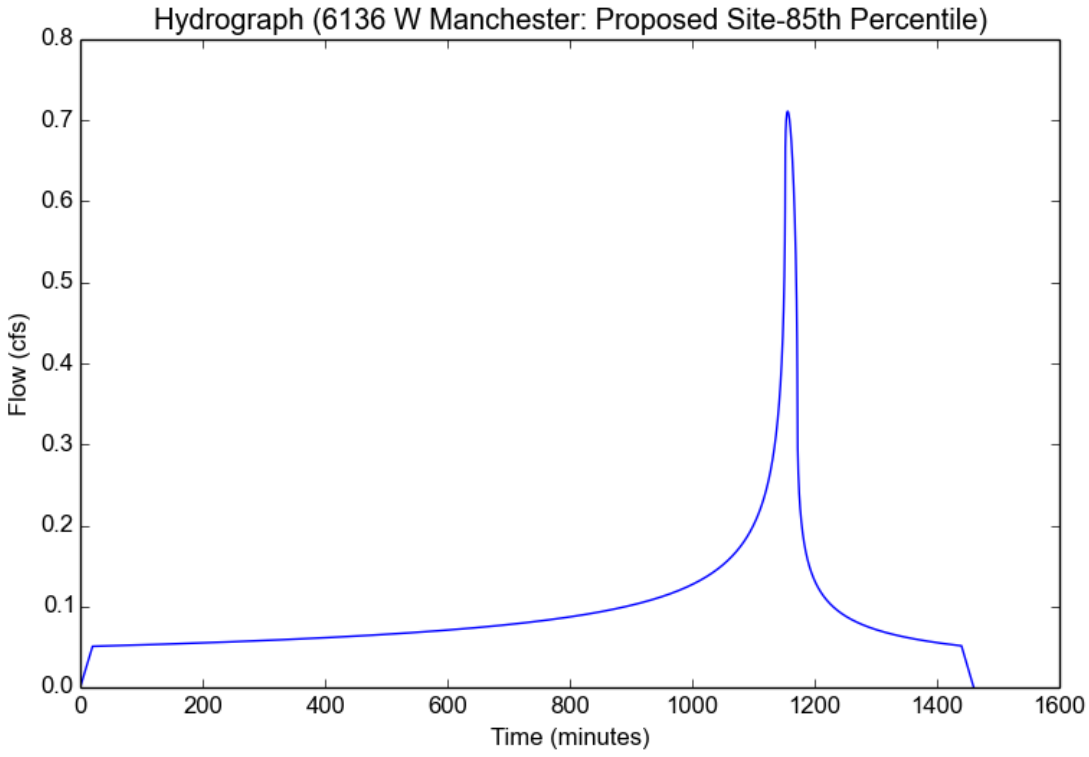


FIGURE 7- LA County Hydrology Data Map

50YR = 5.1"
85TH PERCENTILE = 1.05"

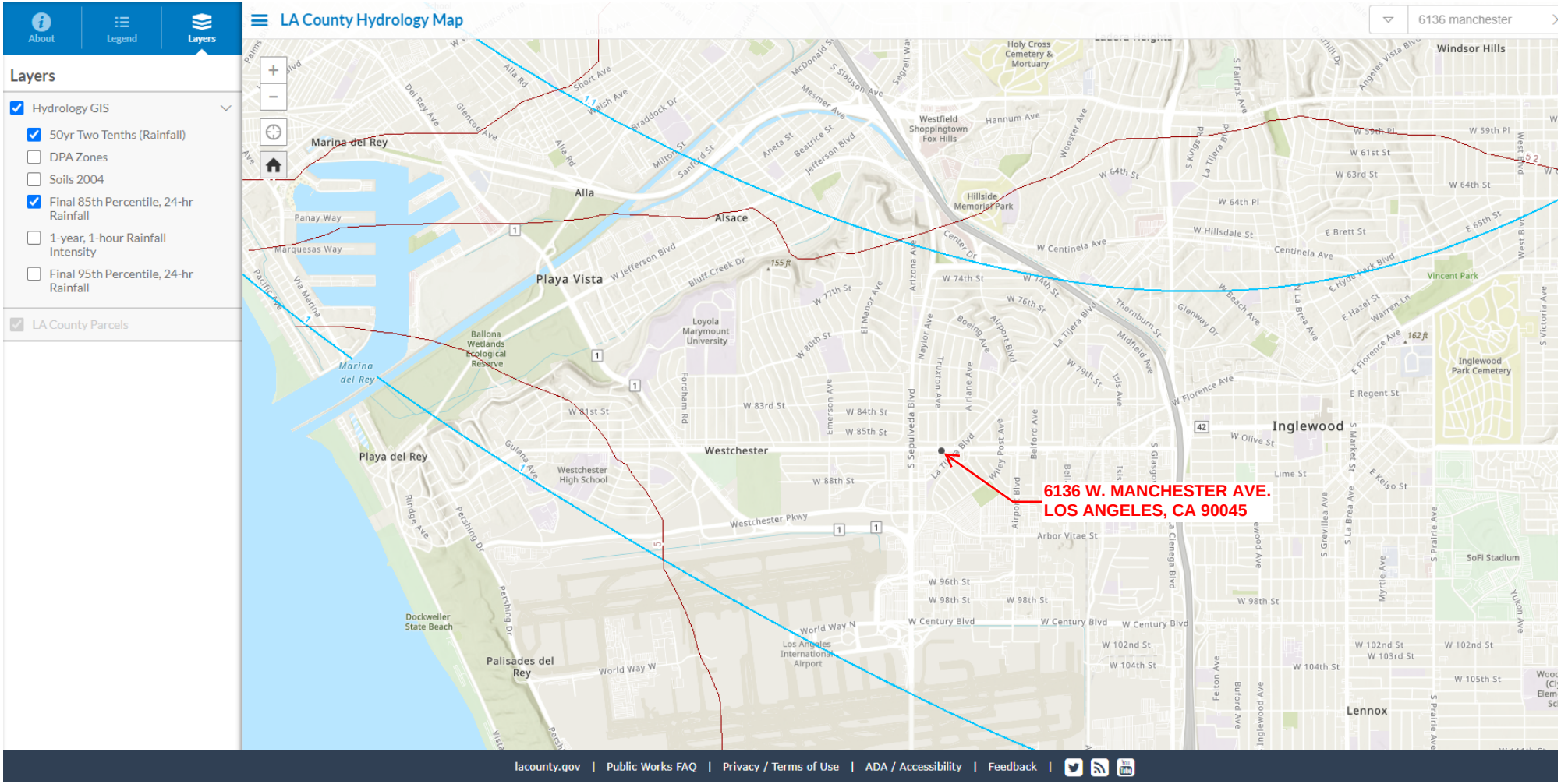


FIGURE 8- Ballona Creek Watershed Map

COUNTY OF LOS ANGELES

BALLONA CREEK & OTHER URBAN WATERSHEDS

Ballona Creek and other Urban Watersheds

Project Site:
6136 W. Manchester Ave.

PACIFIC OCEAN

MILES
0 0.875 1.75 3.5

LEGEND

- BALLONA CREEK & OTHER URBAN WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.

REF: \\pwgisd02\mpmgis$\MPMGIS\projects\mpm\gismaps\wk_2627\ballonacreeketc_wtrsheds.mxd DATE: 08/22/07

Mapping & Property Management Division, Mapping & GIS Services Section

LOS ANGELES COUNTY WATERSHED MAP

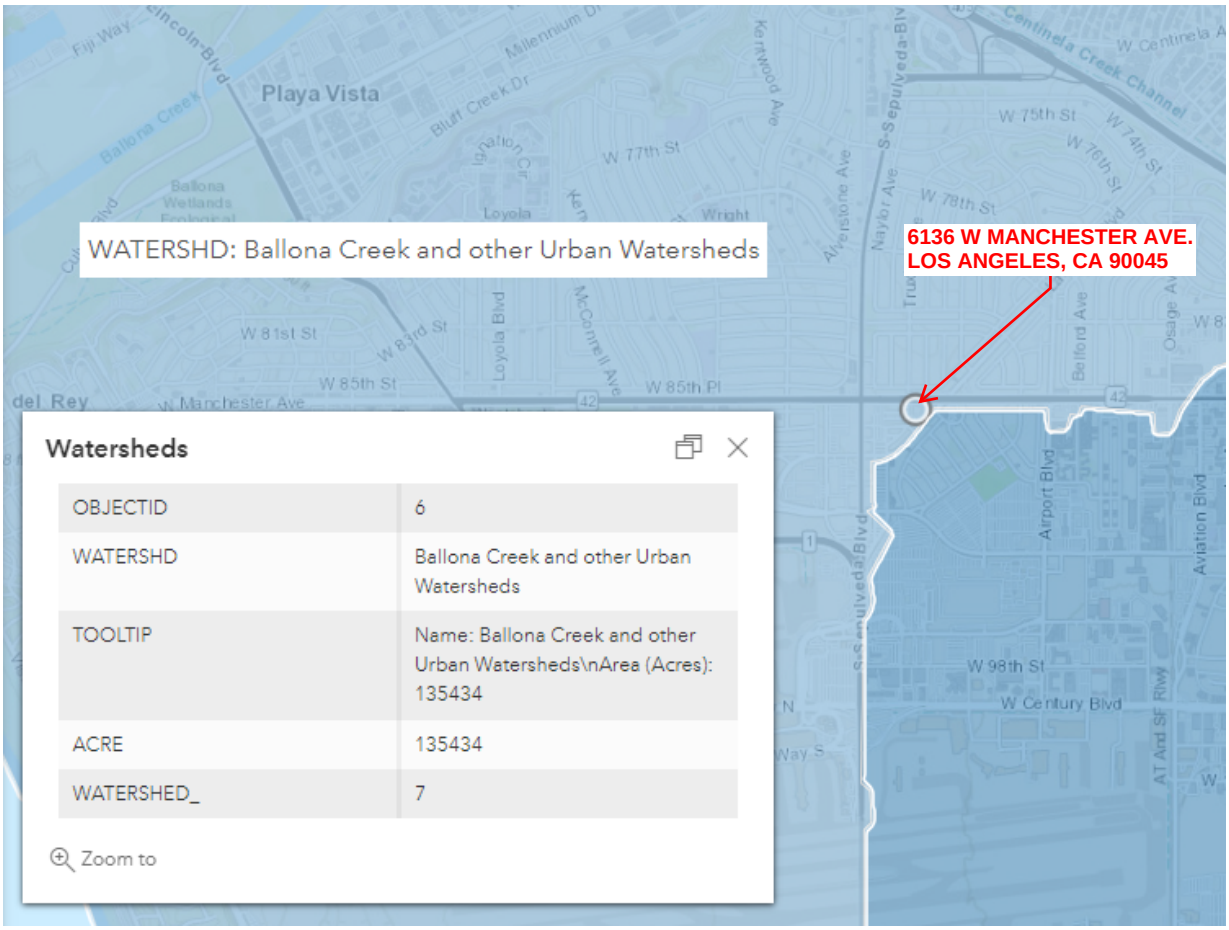
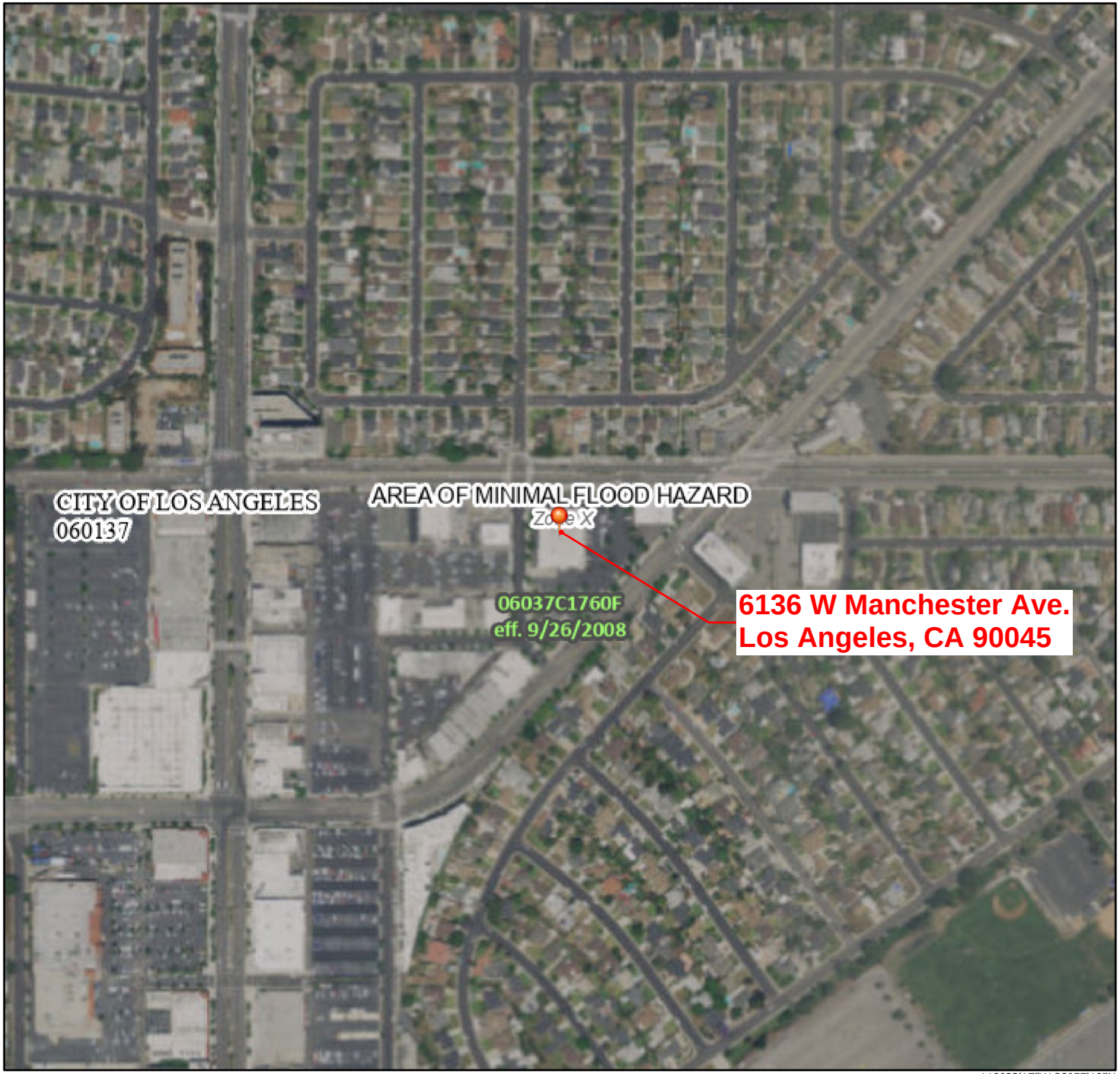


FIGURE 9- FEMA Flood Insurance Rate Map

National Flood Hazard Layer FIRMette

FEMA



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

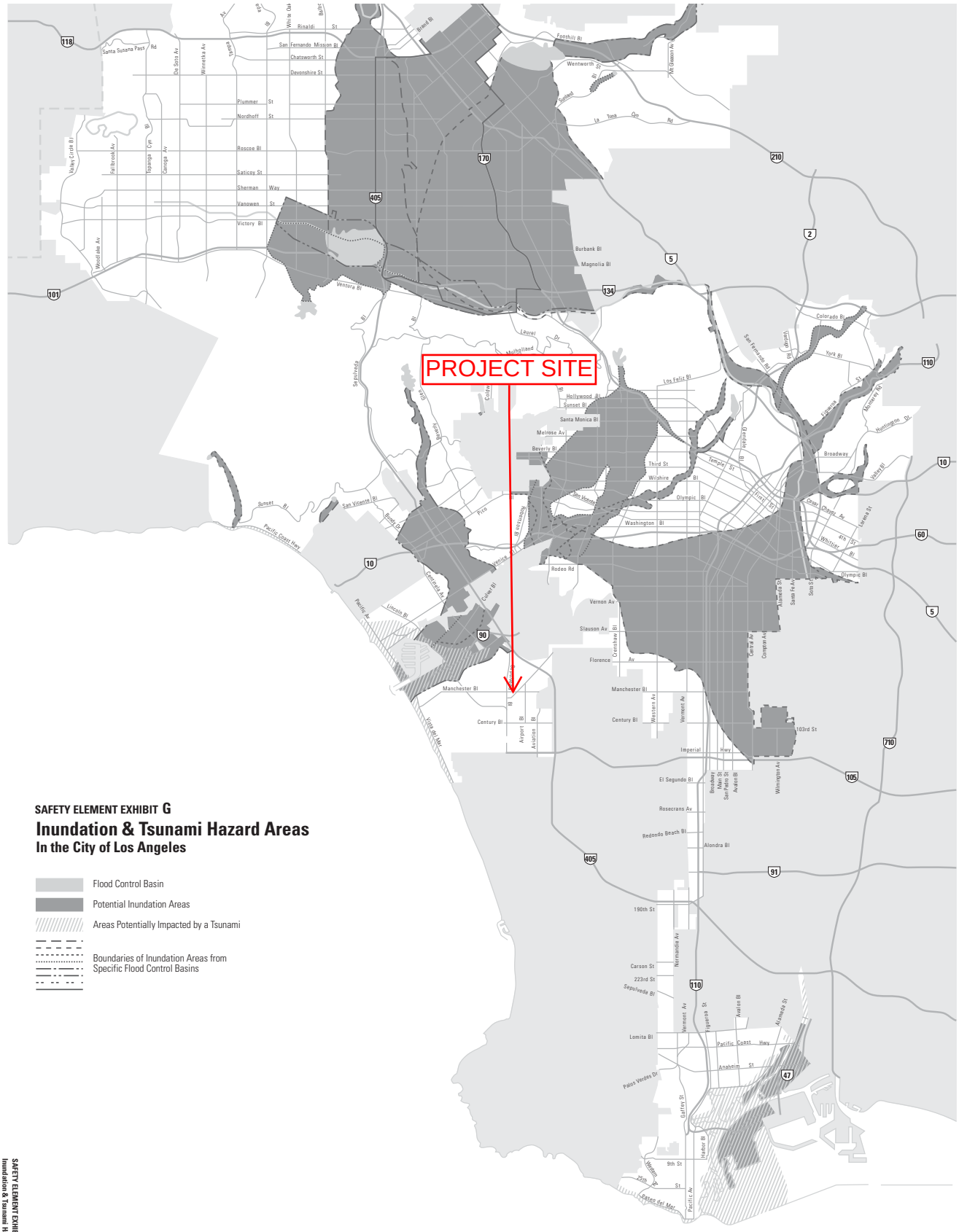
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/15/2022 at 1:35 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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FIGURE 10-
City of Los Angeles Safety Element, Inundation & Tsunami Hazard Area Map



Sources: Environmental Impact Report, Framework Element, Los Angeles City General Plan, May 1995; Technical Appendix to the Safety Element of the Los Angeles County General Plan Hazard Reducation in Los Angeles County, Volume 2, Plate 6, "Flood and Inundation Hazards" January 1990; California Environmental Quality Act of 1970 (CEQA), Public Resources Code Section 21000 *et. seq.* with guidelines as amended, 1992; California Government Code Title 7 chapter 3, article 5 section 65302(g), as amended 1993.

Prepared by the General Plan Framework Section • City of Los Angeles Planning Department • Citywide Graphics • March, 1994 • Council File No. 89-2104