APPENDIX K

Water Resources Technical Report

PSOMAS

9176 Sunset Blvd
Water Resources Technical Report

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TABLE OF CONTENTS

1.0 Introduction

1.1 Project Description

The 9176 Sunset Blvd project, herein known as the Project, involves the development of a 5-story office building with retail and open space on a 0.43-acre site. The Project site currently consists of a car dealership building. The development site is located at 9176 Sunset Blvd and is bounded by Sunset Blvd to the north, Cory Ave to the west, office buildings and an ally to the south, and a parking lot the east.

1.2 Scope of Work

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

2.0 Regulatory Framework

2.1 Surface Water Hydrology

County of Los Angeles Hydrology Manual

The City of West Hollywood has adopted the latest version of the Los Angeles County (County) Department of Public Works Hydrology Manual as its basis of design for storm drainage facilities. The 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 front a 50-year storm event. The County also limits the allowable discharge into existing storm drain facilities based on the 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 basins and storm drain lines requires the approval/review from the County Flood Control District department.

West Hollywood Municipal Code

Any proposed drainage improvements within the street right of way or any other property owned by, to be owned or under the control of the City requires the approval of a Street Improvement Plan. Under Street Improvement Plan, storm drain installation plans are subject to review and approval by the City of West Hollywood Department of Public Works Bureau of Engineering. Additionally, all regional storm drain is controlled by the Los Angeles Flood Control District and any connections to the County's storm drain system from a property line to a catch basin or a storm drain pipe requires a storm drain permit from the County of Los Angeles.

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 several objectives 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.

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 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, (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.

Federal Anti-Degradation Policy

The Federal Antidegradation Policy (40 Code of Federal Regulations 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state antidegradation 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 CWA, including the authority 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 conditions, areas, or types of waste.

California Anti-Degradation Policy

The California Antidegradation 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 Antidegradation Policy, the California Antidegradation 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 Toxic Rule

In 2000, the EPA promulgated the California Toxic 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 Toxic 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 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 California Water Code, 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 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 CWA 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.

The General Permit

SWRCB Order No. 2009-0009-DWQ known as "The General Permit" was adopted on September 2, 2009 and was amended by 2012-006-DWQ which became effective 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 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 for a specific construction project, charging Owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Los Angeles County Municipal Storm Writer System (MS4) Permit

As described above, USEPA regulations require that MS4 permittee's 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 December 13, 2001, the LARWQCD amended Order No. 01-182 under the CWA and the Porter-Cologne Act. This Order is the NPDES Permit or MS4 permit for municipal stormwater and urban runoff discharges within Los Angeles County. The permit includes Total Maximum Daily Load (TMDL) provisions designed to ensure that permittees achieve waste load allocations (WLAs) and meet other requirements of TMDLs covering receiving waters impacted by the permittees' MS4 discharges. The requirements of this Order (the "Permit") cover 84 cities and most of the unincorporated areas of Los Angeles County. Under the Permit, the Los Angeles County Flood Control District (LACFCD) is designated as the Principal Permittee. The Permittees are the 84 Los Angeles County cities (including the City of Los Angeles) and Los Angeles 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 Permittees. The MS4 Permit was amended on September 8, 2016, which is now known as Order No. R4-2012-0175-A01. The purpose of this amendment to the LA County MS4 Permit is to revise select permit provisions consistent with the revised Los Angeles River Watershed Trash TMDL and the revised Ballona Creek Watershed Trash TMDL. These revisions generally include: (a) alternative methods for permittees subject to the revised trash TMDLs to demonstrate full compliance with final trash effluent limitations, (b) revised provisions identifying the permittees subject to the revised trash TMDLs (i.e., removal of the City of Santa Clarita as a responsible permittee and addition of the Los Angeles County Flood Control District as a responsible permittee); (c) plastic pellet monitoring and spill response requirements for the Los Angeles River watershed, consistent with existing provisions for the Ballona Creek watershed; and (d) requirements for receiving water monitoring for trash in the Los Angeles River and

Ballona Creek watersheds. This amendment does not modify existing water quality-based effluent limitations for trash or any compliance deadlines for responsible 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 SQMP 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 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 storm water runoff.

3. Revision of the SQMP:

   - Permittees are required to revise the SQMP 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-Permittees:

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 storm water management program by providing an estimated breakdown of expenditures for different areas of concern, including budget projections foil 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 WMCs 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-storm water 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. Location 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.

Permittees are required to adopt the requirements set herein in their own SUSMP. Additional BMPs may be required by ordinance or code adopted by the Permittee and applied in a general way to all projects or on a case by case basis.

City of West Hollywood Stormwater Program

The City of West Hollywood supports the policies of the Construction General Permit through its Low Impact Development (LID) Plan Guidance, and associated ordinances which the City of West Hollywood adopted as municipal code 15.56.095. The guidance 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 project and results in the issuance of a Waste Discharge Identification (WDID) number, which is needed to demonstrate compliance with the General Permit.

The City of West Hollywood supports the requirements of the Los Angeles County Municipal NPDES permit through the City of West Hollywood's Urban Runoff Management Program, which the City of West Hollywood Department of Public Works adopted in 2015. The Urban Runoff Management Program 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 program is required by City of West Hollywood Ordinance No. 15.56.060.

The City of West Hollywood implements the requirement to incorporate stormwater BMPs into the SUSMP through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plans, 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. The SUSMP provisions that are applicable to new residential and commercial developments include, but are not limited to, the following:

- Peak Storm Water Runoff Discharge Rate: Post-development peak storm water runoff discharges shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion;
- Provide storm drain system Stenciling and Signage (only applicable if a catch basin is built on-site);
- Properly design outdoor material storage areas to provide secondary containment to prevent spills;
- Properly design trash storage areas to prevent off-site transport of trash;
- Provide proof of ongoing BMP Maintenance of any structural BMPs installed;
- Design Standards for Structural or Treatment control BMPs:
    - Conserve natural and landscaped areas;

- Provide planter boxes and/or landscaped areas in yard/courtyard spaces;
- Properly design trash storage areas to provide screens or walls to prevent off-site transport of trash;
- Provide proof on ongoing BMP maintenance of any structural BMPs installed;

- Design Standards for Structural or Treatment Control BMPs:
  - Post-construction treatment control BMPs are required to incorporate, at minimum, either a volumetric or flow-based treatment control design or both, to mitigate (infiltrate, filter or treat) storm water runoff.

In addition, project applicants subject to the SUSMP requirements must select source control and, in most cases, treatment control BMPs from the list approved by the RWQCB. The BMPs must control peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria selected by the local agency. Further, the source and treatment control BMPs must be sufficiently designed and constructed to collectively treat, infiltrate, or filter stormwater runoff. The greatest of the runoffs listed below is used as the design standard for the BMPs:

- The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998);*
- The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in *California Stormwater Best Management Practices Handbook—Industrial/Commercial, (1993);*
- The volume of runoff produced from a 0.75-inch storm event, prior to its discharge to a stormwater conveyance system; or
- The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” (0.75-inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

West Hollywood Municipal Code

Section 15.56 of the West Hollywood Municipal Code 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:

1. Illicit discharges and connections
2. Littering
3. Disposal of landscape debris
4. Non-storm water discharge
   a. The discharge of untreated wash waters to the MS4 when gas stations, auto repair garages, or other type of automotive service facilities are cleaned;
   b. The discharge of untreated wastewater to the MS4 from mobile auto washing, steam cleaning, mobile carpet cleaning, and other such mobile commercial and industrial operations;

c. To the maximum extent practicable, discharges to the MS4 from areas where repair of machinery and equipment, including motor vehicles, which are visibly leaking oil, fluid or antifreeze, is undertaken;

d. Discharges of untreated runoff to the MS4 from storage areas of materials containing grease, oil, or other hazardous substances (e.g., motor vehicle parts), and uncovered receptacles containing hazardous materials;

e. The discharge of chlorinated/brominated swimming pool water and filter backwash;

f. Discharges of untreated runoff from the washing of toxic materials from paved or unpaved areas to the MS4; provided, however that the non-industrial and non-commercial activities which incidentally generate urban runoff, such as the hosing of sidewalks, and the non-commercial hand-washing of cars, shall be excluded from this prohibition;

g. To the maximum extent practicable, discharges to the MS4 from washing impervious surfaces in industrial/commercial areas which results in a discharge of untreated runoff to the MS4, unless specifically required by state's, or the city's, or Los Angeles County's, health and safety codes, or permitted under a separate NPDES permit;

h. Discharges from the washing out of concrete trucks into the MS4;

i. Discharges to the MS4 of any pesticide, fungicide, or herbicide, banned by the U.S. E.P.A. or the California Department of Pesticide Regulation;

j. The disposal of hazardous wastes into trash containers used for municipal trash disposal where such disposal causes or threatens to cause a direct or indirect discharge to the MS4;

k. Discharge of any food or food processing wastes; and

l. Discharge of any fuel and chemical wastes, animal wastes, garbage, batteries, and other materials that have potential adverse impacts on water quality.

5. Discharges in violation of the Municipal NPDES Permit

6. Industrial activities

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 West Hollywood Municipal Code, section 9.70.040 includes regulations pertaining to erosion control and measures to avoid prohibited discharges to MS4.

Low Impact Development (LID)

In June 2015, the City of West Hollywood passed an ordinance (Ordinance No. 15-995) amending City of West Hollywood Municipal Code to expand the applicability of the existing Standard Urban Stormwater Mitigation Plan requirements by imposing rainwater Low Impact Development (LID) strategies on projects that require building permits.

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. Using 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.

The intent of the City of West Hollywood 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 West Hollywood's LID Ordinance conforms to the regulations outlined in the NPDES Permit and SUSMP.

2.3. Groundwater

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

As required by the California Water Code, 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.

Sustainable Groundwater Management Act (SGMA)

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley), collectively known as the Sustainable Groundwater Management Act (SGMA). This act allows California to have a framework for sustainable, groundwater management. SGMA requires governments and water agencies of high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

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 Code of Federal Regulations (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 (The Plan) provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The 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 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 plan includes sustainability goals with the intent of conserving and protecting watersheds and groundwater basins.

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.

3.0 Surface Water Hydrology

3.1 General Approach

The Project site is located within the City therefore, drainage collection, treatment and conveyance are regulated by the City. The City has adopted the 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. To provide a more conservative analysis, this report analyzed the larger storm event threshold, the 50-year frequency design storm event. The 100-year frequency design storm event is also shown for information. 2019 CEQA thresholds state that Surface water impacts may occur when a project results in either increased on- or off-site storm water flows, changes in absorption rates, alterations to existing surface water flow patterns or directions (including the intake and use of water from a surface water body), or other factors which result in a changed rate of flow. Surface waters include lakes, rivers, streams, reservoirs, the ocean, and similar water bodies. Flood hazard is defined as flooding which occurs during a storm event, particularly the 50-year developed storm event.

The analysis of the Project includes the 50-year storm event. Results for the 5-, 10-, 25-, 50-, and 100-year events were all included for information. The 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.

LACDPW developed a time of concentration calculator, Tc Calculator (TC_calc_depth.xls, July 2006), 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 LACDPW has produced Isohyetal maps that provide the Project Site's soil type and the rainfall isohyet value based on the location of the project. Once all values were known, the Tc Calculator was used to calculate the storm water peak runoff flow rate for the Existing and Proposed Project conditions by evaluating an individual sub-area independent of all adjacent subareas. See Table 1 for the Tc Calculator Peak Runoff Flow results. Results for the 5-, 10-, 25-, 50-, and 100-year events were all included for information.

3.2 Data Sources

The primary sources of data are the *LACDPW Hydrology / Sedimentation Manual and Appendices* (LACDPW 2006), and the Los Angeles County *Standard Urban Stormwater Mitigation Plan* (September 2002).

Rainfall and soil characteristics for the Project Site are given in Isohyetal Map Figure LACDPW 1-HI.18 (Section 4). A copy of the map is provided in Section 7.0. The 50-year (24-hour) rainfall isohyet nearest the Project area is approximately 6.50-inches. The isohyets for all of the storm events, based on factors from the LA County Hydrology Manual in Table 5.3.1, are as listed:

- 5-Year 24-Hour: 3.80-inches
- 10-Year 24-Hour: 4.64-inches
- 25-Year 24-Hour: 5.71-inches
- 50-Year 24-Hour: 6.50-inches
- 100-Year 24-Hour: 7.29-inches

As shown on the Isohyetal Map, the soil classification of the Project Site falls predominantly into Soil Type 006. The Project Site area to be disturbed in connection with construction of the Project is approximately 0.43 acres.

3.3 Existing Site Conditions

The existing Project Site is currently occupied by a car dealership and surface parking lot. The Project Site totals approximately 0.43 acres with an assumed average imperviousness of 99%.

Stormwater runoff currently flows out of the Project Site and west on Sunset Blvd, and south on Corey Ave and the public ally to the South. There is a catch basin on the west side of Corey Ave that collects much of the stormwater runoff from the Project site. That catch basin is connected to a 72" reinforced concrete storm drain main line that is owned by LA County Flood Control District. The remaining stormwater flows South to the public ally which conveys runoff to Carol Drive. This breaks the Project's hydrology area into two zones. For this report, we assume each hydrology subarea will be the same in the proposed design to keep the stormwater runoff at or below the existing stormwater flow rates.

The Project Site is located within a FEMA FIRM area of minimal flood hazard, also known as Zone "X". The City of West Hollywood is located within the Ballona Creek watershed, which is discussed further in section 4.2.

3.4 Proposed Project Site Conditions

The proposed Project will consist of 5-story office building that will also include retail and open space on a 0.43-acre site. The assumed average imperviousness of the Project Site will decrease to approximately 90% once all Project improvements, landscaping, and amenities are installed.

The proposed stormwater flows will continue to drain into the 72" storm drain line in Cory Ave and will not change the existing drainage pattern. However, as described below, the Project's compliance with existing Low Impact Development (LID) requirements will create reductions in the stormwater flows to the County's stormwater system. As stated in Section 3.3 Existing Site Conditions, areas which drain to either Sunset Blvd or Cory Ave will be collected and directed to the existing 72" County storm drain. Based on the geotechnical study and results, infiltration is not feasible for this project site.

3.5 Hydrology Results

Table 1 below summarizes the hydrology results demonstrating the peak stormwater runoff flows for the 5-, 10-, 25-, 50- and 100-year storm events under existing conditions and following construction of the Project:

Table 1. Existing and Proposed Peak Runoff Flows

Storm Event	Existing		*Proposed		% Reduction	
-	Area A QTotal [cfs]	Area B QTotal [cfs]	Area A QTotal [cfs]	Area B QTotal [cfs]	Area A	Area B
5-Yr	0.59	0.28	0.48	0.22	18.6%	21.4%
10-Yr	0.72	0.34	0.61	0.28	15.3%	17.6%
25-Yr	0.88	0.42	0.78	0.36	11.4%	14.3%
50-Yr	1.01	0.48	0.91	0.42	9.9%	12.5%
100-Yr	1.13	0.54	1.03	0.48	8.8%	11.1%

* Includes reduction from LID implementation (subtracting the 85th Percentile storm flow of 0.11 cfs and 0.06 cfs for Areas A and B respectively)

The Project Site was reviewed as two hydrology areas (Area A and Area B) to split the runoff flow between Cory Ave or Carol Drive. A tributary area map is included in the appendix which delineates the subareas A and B.

This review demonstrates that the Project will not exceed the existing stormwater flows. It considers the Project's required Low Impact Development (LID) reductions which are needed to manage post construction stormwater runoff. The Project will include the installation of private catch basins, planter drains, and roof downspouts throughout the Project Site to collect roof and site runoff, and direct stormwater to the LID system through a series of private storm drain pipes. This onsite stormwater conveyance system would serve to prevent onsite flooding and nuisance water build-up on the Project Site. With implementation of a stormwater capture and use system (i.e. harvesting system for on-site irrigation use), the volume of water leaving the Project Site will be reduced from the existing flows.

4.0 Surface Water Quality

4.1 General Approach

Construction Best Management Practices (BMP's) will be designed and maintained as part of the implementation of the SWPPP in compliance with the 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 General Permit.

The Project falls under the jurisdiction of the City of West Hollywood, which follows its Low Impact Development (LID) design guidelines. The purpose of this surface water quality report is:

- To meet City of West Hollywood's requirements;
- To document that the Los Angeles County LID requirements will be met;
- To determine the proposed development's impact on existing hydrologic conditions;
- To identify the pollutants of concern and provide BMPs that will mitigate those pollutants of concern; and
- To provide enough detailed information to support detailed hydraulic design of stormwater treatment systems.

The LID requirements, approved by the Regional Water Quality Control Board, call for the treatment of the peak mitigation flow rate, or volume of runoff, produced either by a 0.75" 24-hr rainfall event or the 85th percentile rainfall event. Whichever runoff is greater is the one that is used for the BMP design. Under section 3.1.2 of the LID Manual, this post-construction stormwater runoff from the new development shall be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMP's onsite. The rainfall intensity of the 85th percentile rainfall for the Project Site's location is 1.1 inches; therefore, the 85th percentile rainfall event governs.

4.2 Site Characterization for Water Quality Review

Current Property Use: A car dealership with asphalt roads. There are no known existing BMPs serving the Project Site.

Proposed Property Use: The proposed Project will consist of 5-story office building that will also include retail and open space on a 0.43-acre site.

Soils: The soil of this Project Site is classified as Type 006 as shown in the Hydrology Map from the Los Angeles County Department of Public Works (LACDPW) website as well as the LACDPW Isohyet Map 1-H1.17 (see section 7.0 for maps).

Receiving Waters: The Project Site is tributary to the Ballona Creek.

The Ballona Creek is listed on the 2012 CWA Section 303(d) list (approved by SWRCB June 30, 2015) as impaired due to the prevalence of the pollutants shown in Table 2, which is excerpted from the State Water Resources Control Board, "Quality Limited Segments" article dated June 9, 2016. Currently, this waterway's existing beneficial uses include ground water recharge, warm freshwater habitat, water contact recreation, and non-contact water recreation; potential uses include municipal and domestic supply, industrial service supply, and wildlife habitat.

Table 2: Receiving Waters for Urban Runoff from Site[1]

Receiving Waters	303(d) List Impairments[2]	Designated Beneficial Uses	Proximity to RARE Uses
Ballona Creek	Copper, Cyanide, Indicator Bacteria, Lead, Toxicity, Trash, Viruses (enteric), Zinc	Existing/Intermittent: WILD Potential: MUN, WARM	No

4.3 Pollutants of Concern

Table 3 lists the pollutants anticipated to be generated by the Project's proposed land uses. According to the County of Los Angeles Department of Zoning Regulations, the Project falls under the category of commercial development. Therefore, the following pollutants could potentially be generated: sediment/turbidity, nutrients, organic compounds, trash and debris, oxygen demanding substances, bacteria and viruses, oil and grease and pesticides.

Table 3: Potential Pollutants Generated by Land Use Type[3]

Type of Development (Land Use)	Sediment /Turbidity	Nutrients	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Bacteria & Viruses	Oil & Grease	Pesticides	Metals
Commercial Development	P(1)	P(1)	P(4)	P	P(4)	P	P(3)	P(1)	N

Abbreviations: P=Potential N=Not expected

Notes:
(1) A potential pollutant if landscaping or open area exists on the Project site
(2) A potential pollutant if land use involves animal waste
(3) Specifically, petroleum hydrocarbons
(4) Bacterial indicators are routinely detected in pavement runoff.

A comparison of the pollutants existing in the Ballona Creek based on the State 303(d) list and pollutants associated with the planned land use activities on the Project Site show an overlap of **sediment & turbidity, organic compounds, trash & debris, bacteria & viruses, and metals** as pollutants. These common pollutants are considered the pollutants of concern. Stormwater best management practices (BMP) implemented for the Project in conformance with applicable regulatory requirements will be designed to address these pollutants of concern. Table 4 summarizes the efficiency of general categories of BMPs in treating different types of pollutants.

The County of Los Angeles requires LID compliance for all new development projects. As noted above, the LID concept for this Project is a stormwater capture and use system. The runoff within the cistern will be pumped up for irrigation of the landscape around the Project Site. High flow outlets for the rainwater harvesting cistern will be routed to discharge into the County's storm drain system as per proposed conditions, as described in section 3.4, above.

[1] State Water Resources Control Board, Los Angeles Region. *Water Quality Control Plan Los Angeles Region*. June 13, 1994.
[2] Los Angeles Regional Water Quality Control Board. 2010 CWA Section 303(d) *List of Water Quality Limited Segments*. October 11, 2011.
[3] Riverside County Flood Control and Conservation District, Riverside County Water Quality Management Plan for Urban Runoff, July 24, 2006. Note: This source is utilized because the Los Angeles County Flood Control District has not established a table that outlines pollutants of concern; however, the Riverside County plan accurately represents pollutant types typically occurring in Los Angeles County.

Table 4: Treatment Control BMP Selection Matrix[4]

Ballona Creek Pollutant of Concern (Yes/No)	Treatment Control BMP Categories							
	Veg. Swale /Veg. Filter Strips	Detention Basins	**Planter Box / Harvesting /Infiltration Basins & Trenches**	Wet Ponds or Wetlands	Sand Filter or Filtration	**Water Quality Inlets**	Hydro-dynamic Separator Systems	Manufactured / Proprietary Devices
Sediment/Turbidity	H/M	M	H/M	H/M	H/M	L	H/M (L for turbidity)	U
Yes			✓			✓		
Nutrients	L	M	H/M	H/M	L/M	L	L	U
No								
Organic Compounds	U	U	U	U	H/M	L	L	U
Yes			✓			✓		
Trash & Debris	L	M	U	U	H/M	M	H/M	U
Yes			✓			✓		
Oxygen Demanding Substances	L	M	H/M	H/M	H/M	L	L	U
No								
Bacteria & Viruses	U	U	H/M	U	H/M	L	L	U
Yes			✓			✓		
Oils & Grease	H/M	M	U	U	H/M	M	L/M	U
No								
Pesticides (non-soil bound)	U	U	U	U	U	L	L	U
No								
Metals	H/M	M	H	H	H	L	L	U
Yes			✓			✓		

Abbreviations:
L: Low removal efficiency H/M: High or medium removal efficiency U: Unknown removal efficiency

4.4 Best Management Practices

Source and Treatment Control Best Management Practices (BMPs) are required for this Project under the LA County Standard Urban Stormwater Mitigation Plan (SUSMP) and Los Angeles County Department of Public Works Low Impact Development (LID) Standards Manual.

4.4.1 Site Design BMPs

4.4.1.1 Minimize Stormwater Pollutants of Concern

The Project will minimize pollutants of concern from impacting surface water quality by maximizing the reduction of pollutant loadings per LID standards. The pollutants of concern – namely, sediment & turbidity, organic compounds, trash & debris, bacteria & viruses, and

[4] Riverside County Flood Control and Conservation District, Riverside County Water Quality Management Plan for Urban Runoff, July 24, 2006. Note: This table is utilized because the Los Angeles County Flood Control District has not established a table that summarizes each BMP's efficiency for treating pollutants of concern.

metals – will be addressed through a pre-treatment settlement device connected to the storm drain catch basins within the Project Site. Building and pavement run-off, which comprises of most of the site, will be collected via private storm drains and routed into the storage and reuse system. Prior to connection to capture and use system, inline filters will be installed to remove any debris that enters the on-site piping system. In addition, permeable pavement is proposed on-site to reduce the overall stormwater runoff. All other stormwater runoff will be collected via private on-site catch basins or trench drains.

4.4.1.2 Conserve Natural Areas

The existing Project Site consists of a car dealership and surface parking lot. There is minimal existing landscape within the Project Site. Following development of the Project, the Project Site will include additional landscaped open areas, and as discussed above, will provide water quality treatment to meet the LID requirements of the Los Angeles County Department of Public Works.

4.4.2 Source Control BMPs

4.4.2.1 Protect Slopes and Channels

There are no unprotected slopes or unlined channels onsite. The entire area to be developed will be either vegetated or hardscaped.

4.4.2.2 Provide Storm Drain System Stenciling and Signage

Stenciling will be provided for public storm drains near the vicinity of the Project.

4.4.3 Treatment Control BMPs

4.4.3.1 Mitigation Design (Volumetric or Flow based)

The LID calculation methodology was used to calculate the required treatment volumes for each of the discharge points from the Project Site. Volume-based criteria are used in the sizing of the cistern. LID calculations are provided in section 7.0. The results are summarized in the tables below.

Table 5. Proposed Condition SUSMP Results

Area	Area [ac]	BMP Type	85th percentile *V_M [ft^3]
A	0.29	Stormwater Harvesting	950
B	0.14	Stormwater Harvesting	459

*The total volume (Vm) of stormwater runoff to be mitigated was calculated by analyzing the Project area as two areas. Using this Vm and the appropriate BMP calculation from the City of West Hollywood LID guidance, Table 6 shows the requirements for the area.

Table 6. Summary SUSMP / LID Mitigation BMPs

Area	Area [ac]	Impervious Area [ac]	Required Storage Volume V_M [ft^3]	BMP Type	Provided Treatment V_M [ft^3]	% Treated	Impervious Area Untreated [ac]
A	0.29	0.26	950	Stormwater Harvesting	950	100	0
B	0.14	0.13	459	Stormwater Harvesting	459	100	0
Total Percent Treatment						**100%**	

The proposed BMP will provide full treatment of the 85th percentile storm event. The selected BMP for the Project Site has a larger volume capacity to treat more than the required baseline volume of 950 ft^3 and 459 ft^3 respectively. The total provided treatment volume is 950 ft^3 and 459 ft^3, or 7106 gallons and 3433 gallons respectively.

5.0 Significance Thresholds

5.1 Surface Water and Groundwater Hydrology

With respect to surface water hydrology, the State 2019 CEQA Guidelines (Appendix G) inquire whether the Project would:

- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
    - result in a 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 offsite;
    - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
    - impede or redirect flood flows?

5.2 Surface Water and Groundwater Quality

With respect to surface water quality, the State 2019 CEQA Guidelines (Appendix G) inquire whether the Project would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The City of West Hollywood uses Appendix G of the CEQA Guidelines to determine the significance of a project's impact on surface water quality. These are defined in Section 13050 of the California Water Code (CWC). Pollution, contamination, or nuisance may occur if regulatory standards are violated, as defined in

the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body. The CWC include the following definitions:

"Pollution" means an alteration of the quality of waters of the state to a degree which unreasonably affects either 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 through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether 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 extend 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.

6.0 Project Impact Analysis

6.1 Surface Water and Groundwater Hydrology

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
b. 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:				
i. Result in substantial erosion or siltation on or off-site;	☐	☐	☒	☐
ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site;	☐	☐	☒	☐
iii. Create or combine runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv. Impede or redirect flood flows?	☐	☐	☒	☐

a. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact. As discussed above, construction activities for the project involves the development of a new 5-story office building with retail and open space on a 0.43-acre site. This will include an excavation depth of 36 feet below grade. Excavations are anticipated to range between 35 to 40 feet in depth for the proposed subterranean levels and foundation elements. Groundwater was encountered during exploration at depths of 50 to 53 feet below the existing grade. Per the Seismic Hazard Zone Report for the Beverly Hills 7.5-Minute Quadrangle (CDMG 1998, 2005), the historically highest groundwater level is on the order of 29 feet below the ground surface. Although the excavation is not below the current groundwater level, it is still possible that groundwater could be encountered during excavation. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. NPDES requires dischargers must demonstrate that discharges do not violate any water quality objective/criteria for the receiving waters, demonstrate that discharge shall not exceed effluent limitations, perform an analysis using a sample of groundwater or wastewater to be discharged, show discharge shall not cause acute nor chronic toxicity in receiving waters, that discharge shall pass through a treatment system if necessary, and must comply with the provisions of the NPDES permit. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

Regarding groundwater recharge, the Project Site is currently mostly impervious with approximately 99-percent impervious surfaces. The proposed Project site will consist of approximately 90-percent impervious surfaces. Therefore, there is currently low groundwater recharge potential. While operation of the Project would not change the amount of impervious surface, the underground footprint of the Project's improvements and landscaping would span property line to property line, and therefore the groundwater recharge potential would remain minimal. As stated above, the volume greater than the first flush of stormwater, which bypasses the BMP systems, would discharge to an approved discharge point in the public right-of-way and would not result in infiltration of a large amount of rainfall that would affect groundwater hydrology, including the direction of groundwater flow. As such, the Project would not interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the West Coast Groundwater Basin.

Therefore, the Project's potential impact on groundwater supplies and groundwater recharge would be less than significant, and no mitigation measures are required.

b. Would the project 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:

i. result in substantial erosion or siltation on or off-site;

Less Than Significant Impact. Construction 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 discussed above, Project construction activities would occur in accordance with City industrial/commercial and construction activities regulations (Section 15.56.090 of the West Hollywood Municipal Code), such as the preparation of an erosion control plan, to permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required.

The Project Site is comprised of approximately 99-percent impervious surfaces under existing conditions. With implementation of the Project, the amount of impervious area would decrease to

approximately 90-percent. As such, there would be a limited potential for erosion or siltation to occur from exposed soils or large expanses of pervious areas since the pervious areas would have planting per the landscape architect of the Project. Therefore, the Project would not substantially alter the existing drainage pattern of the Project Site or surrounding area such that substantial erosion or siltation on-site or off-site would occur. Operational impacts to hydrology would be less than significant, and no mitigation measures are required. Impacts are not likely to occur, because as the Regional Water Quality Control Board (RWQCB) dictates, the Project must provide a Low Impact Development (LID) system which will capture and use all the rainwater from the 85th percentile storm. As Table 1 demonstrates, a decrease in runoff is expected due to the development even when the impervious area increases. Therefore, no impact is expected.

ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site

Less Than Significant Impact. There are no streams or rivers within or immediately surrounding the Project Site. Construction activities for the Project would involve removal of the existing structures and associated hardscape as well as the excavation and removal of soil. These activities have the potential to temporarily alter existing drainage patterns on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Project Construction activities would occur in accordance with City industrial/commercial and construction activities regulations (Section 15.56.090 of the West Hollywood Municipal Code), such as the preparation of an erosion control plan, to reduce the effects of sedimentation and erosion. Thus, through compliance with applicable City grading permit regulations, construction activities for the Project would not substantially alter the Project Site drainage patterns in a manner that would result in flooding on- or off-site. As such, construction-related impacts to hydrology would be less than significant, and no mitigation measures are required.

As previously discussed, under the City's LID Ordinance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event (i.e., "first flush"). 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 BMP systems would be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. Therefore, with the implementation of BMPs and an increase in pervious surfaces, the Project would decrease the rate or amount of surface runoff, and would not result in flooding on- or off-site. Table 1 in Section 3.5 of this report summarizes the anticipated peak reduction by storm event. Operational impacts to hydrology would be less than significant, and no mitigation measures are required.

iii. create or combine runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

Less Than Significant Impact. The Project Site currently consists of a car dealership, and very little landscaped areas. The Project Site is 99-percent impervious and is not crossed by any water courses or rivers. Currently, stormwater runoff from the Project Site is conveyed by sheet flow from North to South and is collected in the street within Cory Ave or within the public alley that drains East to Carol Drive. All stormwater eventually is collected in a catch basin at the corner of Phillis and Carol Drive.

As previously discussed, operation of the Project would reduce the impervious surface area of the Project Site to approximately 90-percent. The Project would include the installation of building roof drain downspouts, area drains, and planter drains to collect roof and site runoff. The Project would also direct stormwater away from the building through a series of storm drain pipes. Furthermore, based on the volumetric flow rate analysis, a comparison of the pre- and post-Project peak flow rate indicated that there would be a decrease in stormwater runoff, as shown in Table 1. In addition, the implementation of BMPs required by the City's LID Ordinance would target runoff pollutants that could potentially be carried in stormwater runoff due to the collection of water to meet the regional LID guidelines. Therefore, the Project would not create or contribute runoff water which would exceed the capacity of existing or planned

stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant, and no mitigation measures are required.

iv. impede or redirect flood flows?

Less Than Significant Impact. The Project Site is not located in Zone X and determined to be outside the 0.2% annual chance floodplain, in the Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA). In addition to the low risk of flooding, the Project would implement a capture and use BMP system and a stormwater conveyance system which will reduce off-site flows. Thus, the Project would not alter the existing drainage pattern of the Project Site in a manner that would impede or redirect flood flows. As such, no impacts would occur.

6.2 Surface Water and Groundwater Quality

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	☐	☐	☒	☐
b. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
c. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Less Than Significant Impact. Earthquake-induced flooding occurs when nearby water retaining structures, such as dams or storage tanks, are breached or damaged during an earthquake. The Los Angeles County Safety Element (1990) identified the Project Site to be within a “dam or debris basin flood area”. The Hansen Dam Reservoir has been identified by the Los Angeles County Safety Element (1990) as a potential source being located approximately 17 miles to the northeast of the Project Site. However, there appears to be minimal risk of earthquake-induced flooding at the Project site due to the following:

- In general, there are engineering controls in place that are established by state and local agencies to monitor the dam safety in accordance with the National Dam Safety Act (Public Law 92-367) to ensure that these structures are designed and constructed properly as well as receive regular inspections, maintenance and design retrofits, to reduce the potential for earthquake-induced failures.
- In addition to the site distance, there are also numerous drainage channels and spreading grounds between the source and the Project site, including the Los Angeles River, that would

intercept and divert flood waters that would result from a breach of the Hansen Dam or similar water-storage structures upstream.

Moreover, the Project would not exacerbate potential dam failure or the possibility of flooding because of dam failure.

The Project is located too far away from the ocean and is at too high of an elevation for it to be affected by a tsunami. Seiches, which is a temporary disturbance in the water levels of lakes or partially enclosed bodies of water, will not affect the Project as it is not close enough to a large body of water to be affected.

As previously described, the Project Site is located outside the 0.2% or 500 Yr. Flood Zone in the Flood Insurance Rate Maps from the Federal Emergency Management Agency (FEMA). In addition to the low risk of flooding, the Project includes a capture and use BMP system and a stormwater conveyance system, which would be improved upon the existing site devoid of treatment and on-site detention. Therefore, the Project would not risk release of pollutant due to inundation by flood hazards.

b. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. As discussed in the following analysis, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface of groundwater quality.

Surface Water Quality During Construction

During Project construction, particularly during the grading phase, stormwater runoff from precipitation events could cause exposed and stockpiled soils to be subject to erosion and convey sediments into municipal storm drain systems. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff. Pollutant discharges relating to the storage, handling, use and disposal of chemicals, adhesives, coatings, lubricants, and fuel could also occur. As Project construction would disturb less than one acre of soil, the Project would not be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. However, the Project would be required to implement Best Management Practices (BMP's) as part of the City's grading permit requirements. BMP's would include, but would not necessarily be limited to, erosion control, sediment control, non-stormwater management, and materials management BMP's (e.g., sandbags, storm drain inlets protection, stabilized construction entrance/exit, wind erosion control, and stockpile management) to minimize the discharge of pollutants in stormwater runoff during construction. In addition, Project construction activities would occur in accordance with City grading permit regulations (LAMC Chapter IX, Division 70), such as the preparation of an Erosion Control Plan, to reduce the effects of sediment and erosion.

Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location and discharged into the storm drain system to proceed with construction. Discharges from dewatering operations can contain high levels of fine sediments, which, if not properly treated, could lead to exceedance of the NPDES requirements. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all relevant NPDES requirements related to construction and discharges from dewatering operations. Furthermore, if dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the Los Angeles Regional Water Quality Control Board (LARWQCB) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties.

With the implementation of site-specific BMP's included as part of the Erosion Control Plan required to comply with the City grading permit regulations, the Project would significantly reduce or eliminate the discharge of potential pollutants from the stormwater runoff. Therefore, with compliance with NPDES requirements and City grading regulations, construction of the Project would not violate any water quality standard or waste discharge requirements or otherwise substantially degrade surface water quality.

Furthermore, construction of the Project would not result in discharges that would cause regulatory standards to be violated. Thus, temporary construction-related impacts on surface water quality would be less than significant, and no mitigation measures are required.

Surface Water Quality During Operation

Under the City's Low Impact Development (LID) Guidance, post-construction stormwater runoff from new projects must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMP's on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event (i.e., "first flush"). 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 a capture and use BMP system as established by the LID Guidance document. The installed BMP systems would be designed with an internal bypass overflow system to prevent upstream flooding during major storm events. As most potential contaminants are anticipated to be contained within the "first flush" storm event, major storms are not anticipated to cause an exceedance of regulatory standards.

Due to the nature of the proposed development to change the land use from an existing car lot to an office development, the Project will result in a reduction of potential types of pollutants. As detailed in Section 4.0, a comparison between the potential pollutant based on land use and the 303(d) list for Ballona Creek Watershed indicates that the pollutants of concern are namely **sediment & turbidity, organic compounds, trash & debris, bacteria & viruses, and metals.** These three pollutants of concern will be addressed through the proposed stormwater BMPs to comply with Los Angeles County's Standard Urban Stormwater Mitigation Plan (SUSMP) and City of West Hollywood's Low Impact Development Guidance document. BMPs include, but are not limited to, rainwater harvesting and an increase of landscape area. For example, rainwater harvesting collects rainwater from a surface that allows for the rainwater to be stored and used later. In a typical rainwater harvesting situation, rainwater is collected from an impervious surface such as the roof of a building and then stored inside of a tank or cistern. Rainwater can be collected from other surfaces as well such as parking lots, roadways, driveways, and even land surfaces. Based on the analysis contained in this report, there are no significant impacts for surface water quality because of the Project.

With compliance under the SWPPP, SUSMP, and the City's LID Regulations, construction and operational water quality impacts would be less than significant.

Groundwater Quality During Construction

As discussed above, construction activities for the project involves the development of a new 5-story office building with retail and open space on a 0.43-acre site. This will include an excavation depth of 36 feet below grade. Excavations are anticipated to range between 35 to 40 feet in depth for the proposed subterranean levels and foundation elements. Groundwater was encountered during exploration at depths of 50 to 53 feet below the existing grade. Per the Seismic Hazard Zone Report for the Beverly Hills 7.5-Minute Quadrangle (CDMG 1998, 2005), the historically highest groundwater level is on the order of 29 feet below the ground surface. Although the excavation is not below the current groundwater level, it is still possible that groundwater could be encountered during excavation. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. NPDES requires dischargers must demonstrate that discharges do not violate any water quality objective/criteria for the receiving waters, demonstrate that discharge shall not exceed effluent limitations, perform an analysis using a sample of groundwater or wastewater to be discharged, show discharge shall not cause acute nor chronic toxicity in receiving waters, that discharge shall pass through a treatment system if necessary, and must comply with the provisions of the NPDES permit. Therefore, through compliance with regulatory requirements, potential impacts would be less than significant.

If dewatering is required, the treatment and disposal of the dewatered water would occur in accordance with the Los Angeles Regional Water Quality Control Board (LARWQCB) Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters

in Coastal Watersheds of Los Angeles and Ventura Counties. Therefore, Project construction could potentially improve the existing condition by removing impacted groundwater. In addition, the proposed construction activities would be typical of a residential project and would not involve activities that could further impact the underlying groundwater quality.

Other potential effects to groundwater quality could result from the presence of an underground storage tank (UST) or during the removal of an UST. As previously described, however, no existing UST's are anticipated to be found beneath the Project Site. Therefore, the removal of UST's would not pose a significant hazard on groundwater.

Based on the above, construction of the Project would not result in discharges that would violate any groundwater quality standard or waste discharge requirements. Therefore, construction-related impacts on groundwater quality would be less than significant, and no mitigation measures are required.

Groundwater Quality During Operation

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking UST's. 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 have a greater potential to affect groundwater. However, as discussed above, the Project would not include any new UST's that would have the potential to expose groundwater to contaminants. In addition, while the Project would introduce more density and an additional land use (commercial) to the project site which would slightly increase the use of potentially hazardous materials as described above, the Project would comply with all applicable existing regulations that would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing 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 and the Safe Drinking Water Act. The Project also does not include the installation or operation of water wells, or any extraction or recharge system near the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well, or a spreading ground facility.

In addition, the Project includes the installation of a capture and use system as a means of treatment and disposal of the volume of water produced by the greater of the 85th percentile storm or the 0.75-inch storm event, which would allow for treatment of the on-site stormwater. Therefore, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade ground water quality. The Project's potential impact on groundwater quality during operation would be less than significant, and no mitigation measures are required.

c. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. Under Section 303(d) of the Clean Water Act, states are required to identify water bodies that do not meet their water quality standards. Biennially, the Los Angeles Regional Water Quality Control Board (LARWQCB) prepares a list of impaired waterbodies in the region, referred to as the 3030(d) list. The 303(d) list are subject to the development of a Total Maximum Daily Load (TMDL). As discussed in this report, the Project Site is located within the Ballona Creek Watershed. Constituents of concern listed for the Ballona Creek Watershed under California's Clean Water Act Section 303(d) List include Copper, Cyanide, Indicator Bacteria, Lead, Toxicity, Trash, Viruses (enteric) and Zinc. No Total Maximum Daily Load (TMDL) data have been recorded by EPA for this waterbody.

As described above, based on observation of existing conditions, stormwater currently discharges from the Project Site without treatment or on-site detention. Thus, the Project's implementation of a capture and use BMP system would minimize the release of anticipated and potential pollutants generated by the Project (e.g., sediment, nutrients, pesticides, metals, pathogens, and oil and grease). As the project would not increase the amount of impervious area, implementation of the LID BMP measures on the Project Site would result in an improvement in surface water quality runoff when compared to existing conditions. In

addition, during construction operations the project site is required by the State Water Resources Control Board (SWRCB) to implement stormwater management Best Management Practices (BMPs) as required in the project's Stormwater Pollution Prevention Program (SWPPP) following the latest guidelines of the California Stormwater Quality Association (CASQA) handbook. These BMPs will ensure that stormwater runoff quality during construction is maintained in a manner which reduces sediment transmission, lowers stormwater turbidity, as well as maintains the overall pH of the stormwater.

Furthermore, the treatment and on-site detention of stormwater runoff would help to replenish the groundwater in the Hollywood Subbasin. The Project site is located in the Hollywood (groundwater) Subbasin of the Coastal Plain of the Los Angeles Groundwater Basin. The Hollywood Subbasin underlies the northeastern part of the Coastal Plain of Los Angeles Groundwater Basin. The subbasin is bounded on the north by Santa Monica Mountains and the Hollywood fault, on the east by the Elysian Hills, on the west by the Inglewood fault zone, and on the south by the La Brea High, formed by an anticline that brings impermeable rocks close to the surface. Surface drainage flows southward to join Ballona Creek, then westward to the Pacific Ocean. Average annual precipitation ranges from 12 to 14 inches (South Coast Hydrologic Region 2004). Groundwater in the Hollywood Subbasin is replenished by percolation of precipitation and stream flow.

As such, the Project would not conflict with or obstruct any water quality control or sustainable groundwater management plans. With compliance with existing regulatory requirements and implementation of LID BMP's, the Project would no conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Surface Water Hydrology During Construction

During construction of the project, a SWPPP written by a Qualified SWPPP Developer will be prepared to implement temporary control measures throughout the construction phase. The SWPPP is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended in 2010 and 2012 (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). In accordance with the General Permit, Section XIV, the SWPPP is designed to address the following:

- Sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;

Surface Water Hydrology During Operation

Per West Hollywood Municipal Code Guidelines, required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

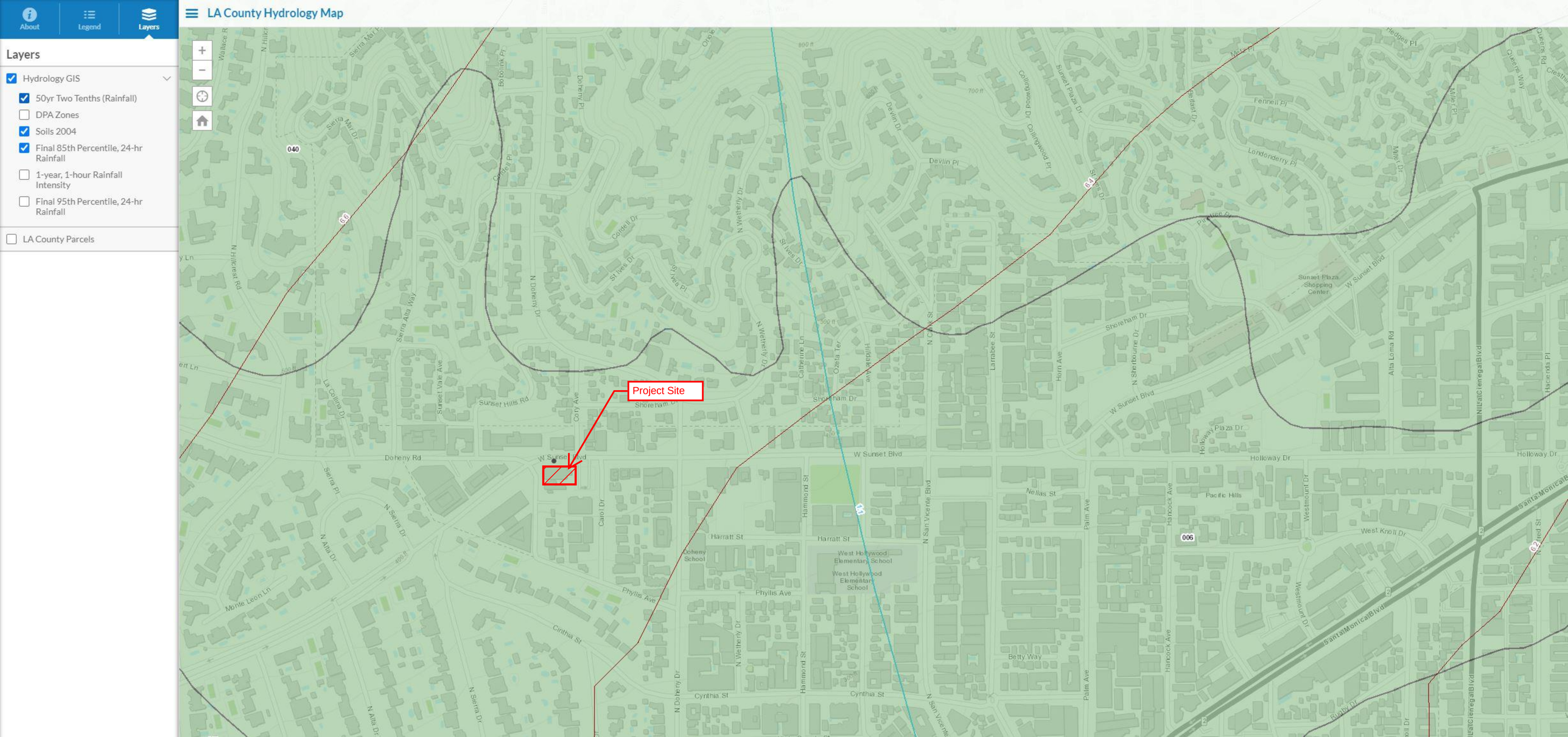
1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;
5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.
    a. Post-construction water balance calculation;
    b. Active Treatment System (ATS) plan; and
    c. Dischargers proposing an alternate soil erodibility factor must submit justification (documentation of methods used [e.g. soil particle size analysis].

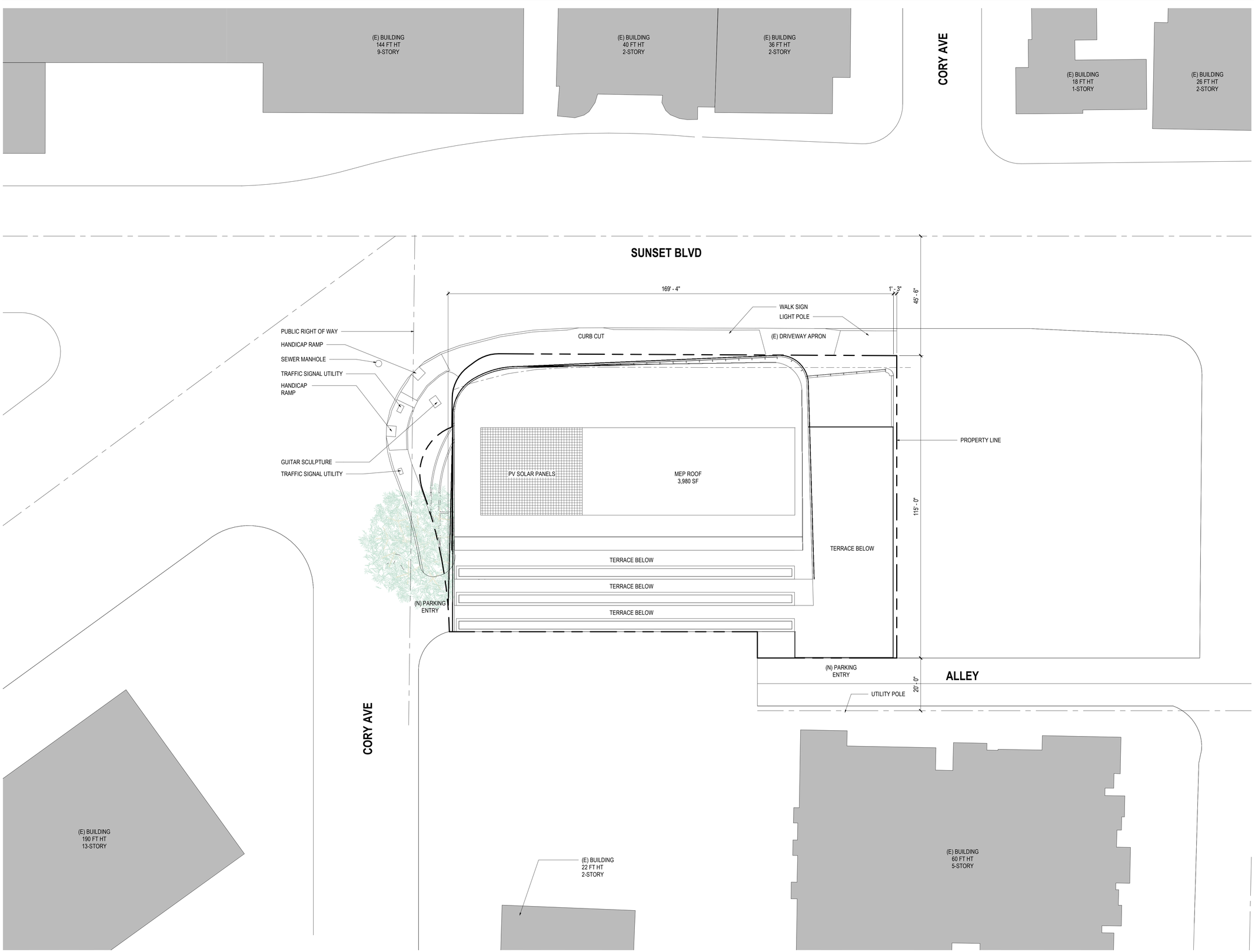
With compliance with the above regulatory requirements, the Project will have less than significant impact on the surface water hydrology. Specifically, based on the above, the Project would not result in an incremental impact for flooding on either on-site or off-site areas during a 50-year storm event, it would not substantially increase the amount of surface water in a water body, and it will not result in a permanent adverse change to the movement of surface water that would result in an incremental effect on the capacity of the existing storm drain system. As demonstrated in Section 3.5, the Project would also not require significant new stormwater infrastructure since there will be a reduction in stormwater flows due to the Project's required LID reductions. Therefore, the development of the Project would result in less than significant impact on surface water hydrology.

Cumulative Impact Analysis

The geographic context for the cumulative impact analysis on surface water hydrology is the Ballona Creek Watershed. The Project in conjunction with forecasted growth in the Ballona Creek Watershed could cumulatively increase stormwater runoff flows. However, as noted above, the Project would have no net impact on stormwater flows. Also, in accordance with City requirements, related projects and other future development projects would be required to implement BMPs to manage stormwater in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure enough local and regional infrastructure is available to accommodate stormwater runoff. Therefore, potential cumulative impacts associated with the Project on surface water hydrology would be less than significant.

7.0 Calculations and Site Plan


About
Legend
Layers
LA County Hydrology Map
Layers
Hydrology GIS
50yr Two Tenths (Rainfall)
DPA Zones
Soils 2004
Final 85th Percentile, 24-hr Rainfall
1-year, 1-hour Rainfall Intensity
Final 95th Percentile, 24-hr Rainfall
LA County Parcels
Project Site
Doheny Rd
W Sunset Blvd
Sunset Hills Rd
Shoreham Dr
Holloway Dr
Harratt St
Phyllis Ave
Cynthia St
Betty Way
Nellas St
Pacific Hills
West Knoll Dr
Doheny School
West Hollywood Elementary School
Sunset Plaza Shopping Center
Santa Monica Blvd
040
006



JBC
The John Buck Company
9176 Sunset Blvd
West Hollywood
California 90069

Gensler
500 South Figueroa Street
Los Angeles, California 90071
United States
Tel 213.327.3600
Fax 213.327.3601

△ Date	Description
12/23/2019	ENTITLEMENT SUBMITTAL

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
Sunset Jewel Box

Project Number
05.2543.000

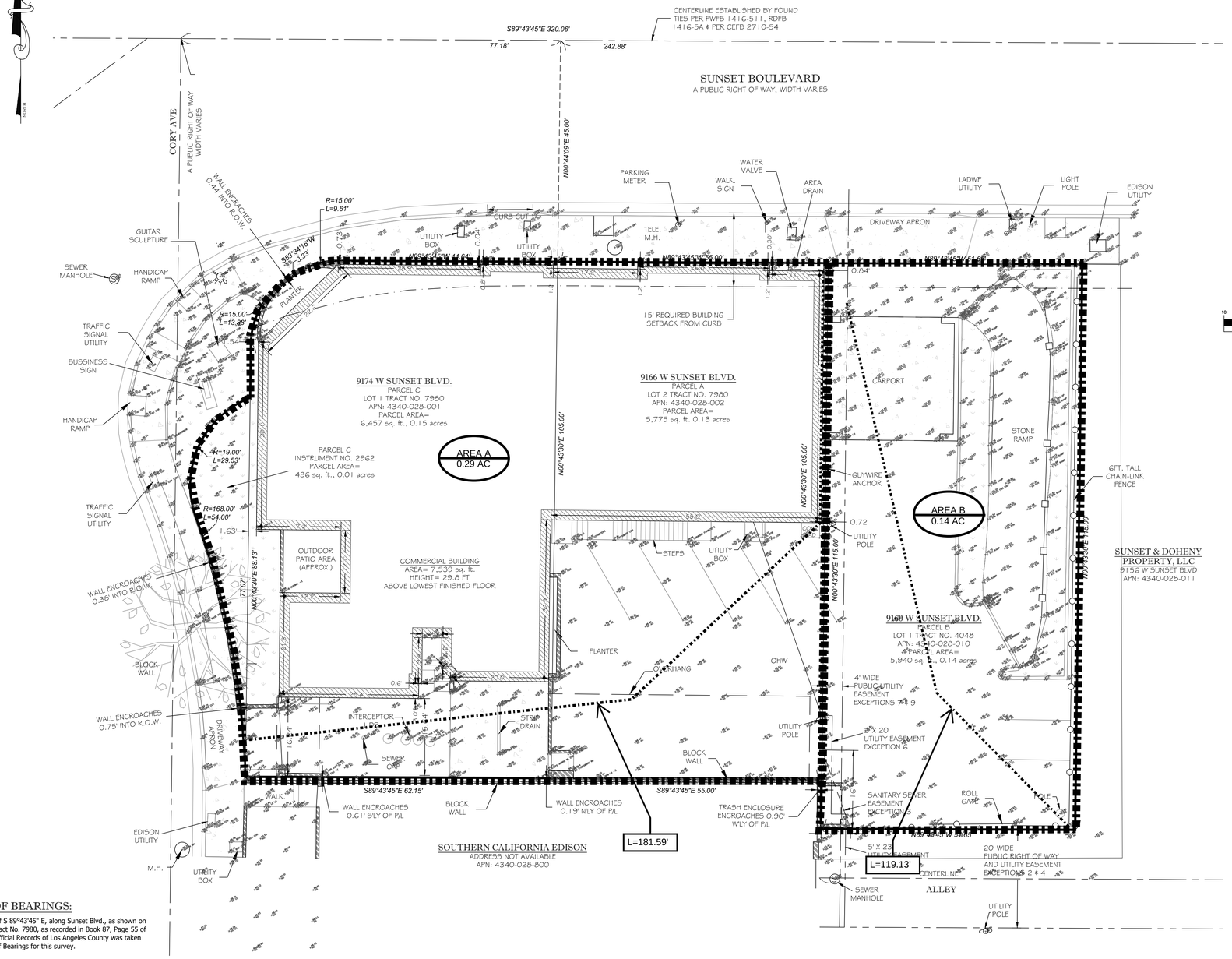
Description
SITE PLAN - PROPOSED

Scale
1/16" = 1'-0"

A1.00

A.L.T.A./N.S.P.S. LAND TITLE SURVEY

9160, 9166, 9174 WEST SUNSET BOULEVARD
WEST HOLLYWOOD, CA



LEGEND:

- PROPERTY LINE
- RIGHT OF WAY CENTERLINE
- EASEMENT
- BUILDING
- WALL
- CONCRETE
- PAVEMENT
- SUB AREA BOUNDARY
- FLOW LINE PATH
- AREA A 0.29 AC — SUB AREA

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 inch = 10 ft.

BASIS OF BEARINGS:

The bearing of S 89°43'45" E, along Sunset Blvd., as shown on the map of Tract No. 7980, as recorded in Book 87, Page 55 of Maps in the Official Records of Los Angeles County was taken as the Basis of Bearings for this survey.

SURVEYOR'S CERTIFICATION:

To: Buck Acquisitions, LLC, their successors and assigns
And: LDRI CA 306 LLC, thier successors and assigns
And: Fidelity National Title Company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 2, 3, 4, 6(a), 7(b)(1), 7(c), 8, 9, 11, 13, 14, 16, 17, 18, 19 and 20 of Table A thereof. The field work was completed in the month of July 2019.

KACIE A PLOUFF PLS#9013

CHRISTENSEN & PLOUFF
LAND SURVEYING
• 25909 PREMIERE CANYON ROAD, STE A •
• VALENCIA, CA 91355 •
• 661-645-0260 • www.plsurveying.com •

DATE : 07 / 10 / 2019
DRAWING SCALE: 1"= 10'
PREPARED BY: KACIE PLOUFF
APPROVED BY: KACIE PLOUFF
FILE NAME: SCA-19-125-9160,9166,9174 SUNSET BLVD LA ALTA

9160, 9166, 9174 WEST SUNSET BOULEVARD
CITY OF WEST HOLLYWOOD
COUNTY OF LOS ANGELES
STATE OF CALIFORNIA
APN(S): 4340-028-001, 002, 010

PROJECT: ALTA/NSPS LAND TITLE SURVEY

PROJECT NO.
CA-19-125

SHEET NO.
2 OF 2

△ Date	Description
12/23/2019	ENTITLEMENT SUBMITTAL

JBC
The John Buck Company
9176 Sunset Blvd
West Hollywood
California 90069

Gensler
500 South Figueroa Street
Los Angeles, California 90071
United States
Tel 213.327.3600
Fax 213.327.3601

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
Sunset Jewel Box

Project Number
05.2543.000

Description
CTL+SHFT+CLICK TO EDIT TEXT HERE

Scale

C1.01

Project No, 1JAM020300
2801 SUNSET PLACE
LOS ANGELES, CA

Volume Calculations - 9176 Sunset Blvd - Area A

Givens:

Areas =

Breakdown	sqft	acre	%
Area Total	12,632	0.29	100%
Impervious, Ai	11,369	0.261	90.0%
Pervious, Ap	1,263	0.029	10.0%
Undeveloped Area, Au	0	0	0%
Exempt Area	0	0	0.0%
TOTAL	**12,632**	**0.29**	**100%**
Landscaped Areas Counted Towards Mitigation Volume*			
Landscaped Area	1,263	0.029	
TOTAL Pervious	**1,263**	**0.029**	
Landscaped Areas Counted Towards ETWU**			
Additional Landscaped Area	0	0	
TOTAL Additional Pervious	**0**	**0**	
Exempt Area***			
Pool and Spa	0	0	
TOTAL Exempt	**0**	**0.00**	

Inputs

***Note these are landscaped areas exposed to the sky.**

****Note these are additional landscaped areas NOT EXPOSED to the sky.**

*****Note these are water features exposed to the sky.**

Design Storm =	85th Percentile		(Per City of LA requirement)
Design Storm Intensity =	1.1	in	(Per City of LA requirement)
Planting Factor (medium use)/ IE =	0.62		(Per Landscape Architect)
Planting Factor (low use) /IE=	0.37		
7 Month Evapotranspiration, ET_7	21.7		(Per City of LA Irrigation Guidelines, App C)

Determine the Mitigation Volume (V_M):

V_M (ft^3) = 1 INCH (in) * Catchment Area (acres) * (3630 cuft/1ac-in)

where Catchment Area (acres) = (Impervious Area * 0.9) + [(Pervious area + Undeveloped area) * 0.1]

V_M (ft^3) = 1.1*[(0.261*0.9)+[(0.029+0)*0.1]] * 3630 ft^3

i. V_M (ft^3) = 950 ft^3 or 7,107 Gallons **(If Design is Capture and Use i.e. Rainwater Harvesting)**

The design will be a rainwater harvesting system, therefore,

V_M (ft^3) =	950	ft^3	or	7,107	Gallons

Project No, 1JAM020300
2801 SUNSET PLACE
LOS ANGELES, CA

Determine planting area (ft^2):

Planting Area (ft^2) =	1263.24 + 0	ft^2
Planting Area (ft^2) =	1,263	ft^2

ii. Determine the 7-month (Oct 1-April 30) Estimated Total Water Use (ETWU):
PA= Planting Area ; ETAF= Evapotranspiartion Adjustment Factor
Medium Water Use:

$ETWU_{(7\text{-month})}$ =	ET_7 x 0.62 x PA x ETAF	
$ETWU_{(7\text{-month})}$ =	21.7 x 0.62 x 7,187 x 0.62	
$ETWU_{(7\text{-month})}$ =	**59950**	**gal**

Low Water Use:

$ETWU_{(7\text{-month})}$ =	ET_7 x 0.62 x PA x ETAF	
$ETWU_{(7\text{-month})}$ =	21.7 x 0.62 x 14,819 x 0.37	
$ETWU_{(7\text{-month})}$ =	**73769**	**gal**

iii. Verify $ETWU_{(7\text{-month})}$ is greater than or equal to V_{WQDV}:

$ETWU_{(7\text{-month})}$		$V_{(Design)}$ (gal)
133,719	≥	*7,107*

CAPTURE AND USE IS FEASIABLE

Compare $ETWU_{(7\text{-month})}$ vs V_{WQDV} vs $V_{selected\ tank}$:

iv.
$$\frac{ETWU_{(7\text{-month})}}{V_{(Design)}\ (gal)} = \frac{133,719}{7,107} = 18.82$$

Estimated Total Water Use over 7 months (Oct 1 - April 30) uses 18.82 times of required design volume.

v.
$$\frac{ETWU_{(7\text{-month})}}{V_{(Selected\ storage)}\ (gal)} = \frac{133,719}{62,802} = 2.13$$

Estimated Total Water Use over 7 months (Oct 1 - April 30) uses 2.13 times of selected tank volume.

Storage Volume Dimensions

vi. ***Storage Room Volume***

62,802 gal of storage volume calculated by taking into account the required depth for the submersible pump.

Project No, 1JAM020300
2801 SUNSET PLACE
LOS ANGELES, CA

Volume Calculations - 9176 Sunset Blvd - Area B

Givens:

Areas =

Breakdown	sqft	acre	%
Area Total	6,098	0.14	100%
Impervious, Ai	5,489	0.126	90.0%
Pervious, Ap	610	0.014	10.0%
Undeveloped Area, Au	0	0	0%
Exempt Area	0	0	0.0%
TOTAL	**6,098**	**0.14**	**100%**
Landscaped Areas Counted Towards Mitigation Volume*			
Landscaped Area	610	0.014	
TOTAL Pervious	**610**	**0.014**	
Landscaped Areas Counted Towards ETWU**			
Additional Landscaped Area	0	0	
TOTAL Additional Pervious	**0**	**0**	
Exempt Area***			
Pool and Spa	0	0	
TOTAL Exempt	**0**	**0.00**	

Inputs

***Note these are landscaped areas exposed to the sky.**

****Note these are additional landscaped areas NOT EXPOSED to the sky.**

*****Note these are water features exposed to the sky.**

Design Storm =	85th Percentile		(Per City of LA requirement)
Design Storm Intensity =	1.1	in	(Per City of LA requirement)
Planting Factor (medium use)/ IE =	0.62		(Per Landscape Architect)
Planting Factor (low use) /IE=	0.37		
7 Month Evapotranspiration, ET_7	21.7		(Per City of LA Irrigation Guidelines, App C)

Determine the Mitigation Volume (V_M):

V_M (ft^3) = 1 INCH (in) * Catchment Area (acres) * (3630 cuft/1ac-in)

where Catchment Area (acres) = (Impervious Area * 0.9) + [(Pervious area + Undeveloped area) * 0.1]

V_M (ft^3) = 1.1*[(0.126*0.9)+[(0.014+0)*0.1]] * 3630 ft^3

i. V_M (ft^3) = 459 ft^3 or 3,434 Gallons **(If Design is Capture and Use i.e. Rainwater Harvesting)**

The design will be a rainwater harvesting system, therefore,

V_M (ft^3) =	**459**	**ft^3**	**or**	**3,434**	**Gallons**

Project No, 1JAM020300
2801 SUNSET PLACE
LOS ANGELES, CA

Determine planting area (ft^2):

Planting Area (ft^2) =	609.84 + 0	ft^2
Planting Area (ft^2) =	610	ft^2

ii. Determine the 7-month (Oct 1-April 30) Estimated Total Water Use (ETWU):
PA= Planting Area ; ETAF= Evapotranspiartion Adjustment Factor
Medium Water Use:

$ETWU_{(7\text{-month})}$ =	ET_7 x 0.62 x PA x ETAF	
$ETWU_{(7\text{-month})}$ =	21.7 x 0.62 x 7,187 x 0.62	
$ETWU_{(7\text{-month})}$ =	**59950**	**gal**

Low Water Use:

$ETWU_{(7\text{-month})}$ =	ET_7 x 0.62 x PA x ETAF	
$ETWU_{(7\text{-month})}$ =	21.7 x 0.62 x 14,819 x 0.37	
$ETWU_{(7\text{-month})}$ =	**73769**	**gal**

iii. Verify $ETWU_{(7\text{-month})}$ is greater than or equal to V_{WQDV}:

$ETWU_{(7\text{-month})}$	≥	$V_{(Design)}$ (gal)
133,719	≥	3,434

CAPTURE AND USE IS FEASIABLE

Compare $ETWU_{(7\text{-month})}$ vs V_{WQDV} vs $V_{selected\ tank}$:

iv.
$$\frac{ETWU_{(7\text{-month})}}{V_{(Design)}\ (gal)} = \frac{133,719}{3,434} = 38.94$$

Estimated Total Water Use over 7 months (Oct 1 - April 30) uses 38.94 times of required design volume.

v.
$$\frac{ETWU_{(7\text{-month})}}{V_{(Selected\ storage)}\ (gal)} = \frac{133,719}{62,802} = 2.13$$

Estimated Total Water Use over 7 months (Oct 1 - April 30) uses 2.13 times of selected tank volume.

Storage Volume Dimensions

vi. ***Storage Room Volume***

62,802 gal of storage volume calculated by taking into account the required depth for the submersible pump.

Peak Flow Hydrologic Analysis

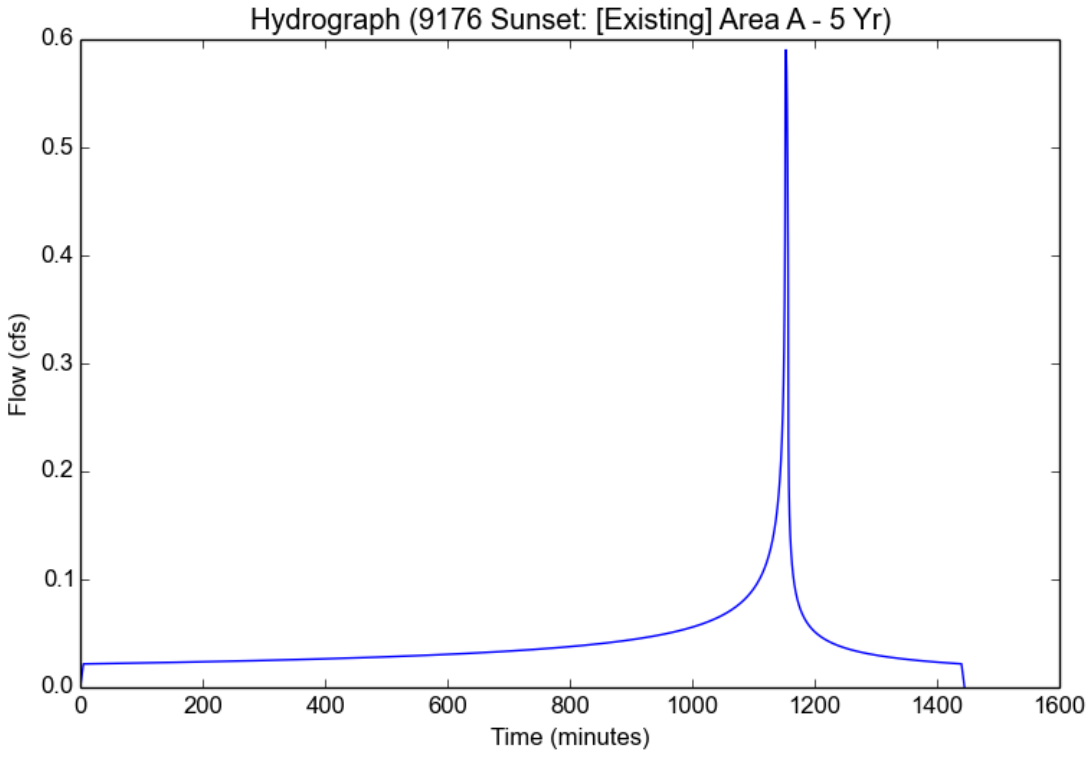
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area A/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area A - 5 Yr
Area (ac)	0.29
Flow Path Length (ft)	181.59
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	5-yr
Fire Factor	0
LID	False

Output Results

Modeled (5-yr) Rainfall Depth (in)	3.796
Peak Intensity (in/hr)	2.2648
Undeveloped Runoff Coefficient (Cu)	0.7614
Developed Runoff Coefficient (Cd)	0.8986
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5902
Burned Peak Flow Rate (cfs)	0.5902
24-Hr Clear Runoff Volume (ac-ft)	0.0812
24-Hr Clear Runoff Volume (cu-ft)	3537.7261



Peak Flow Hydrologic Analysis

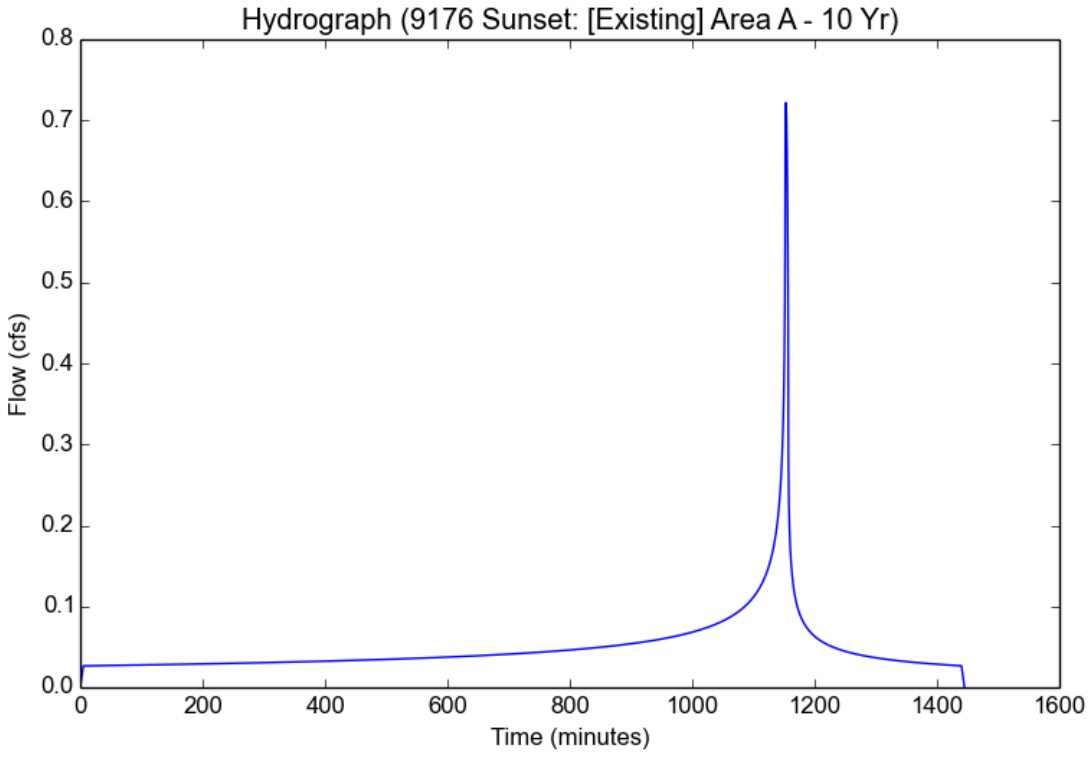
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area A/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area A - 10 Yr
Area (ac)	0.29
Flow Path Length (ft)	181.59
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	4.641
Peak Intensity (in/hr)	2.7689
Undeveloped Runoff Coefficient (Cu)	0.8061
Developed Runoff Coefficient (Cd)	0.8991
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.7219
Burned Peak Flow Rate (cfs)	0.7219
24-Hr Clear Runoff Volume (ac-ft)	0.0993
24-Hr Clear Runoff Volume (cu-ft)	4326.1167



Peak Flow Hydrologic Analysis

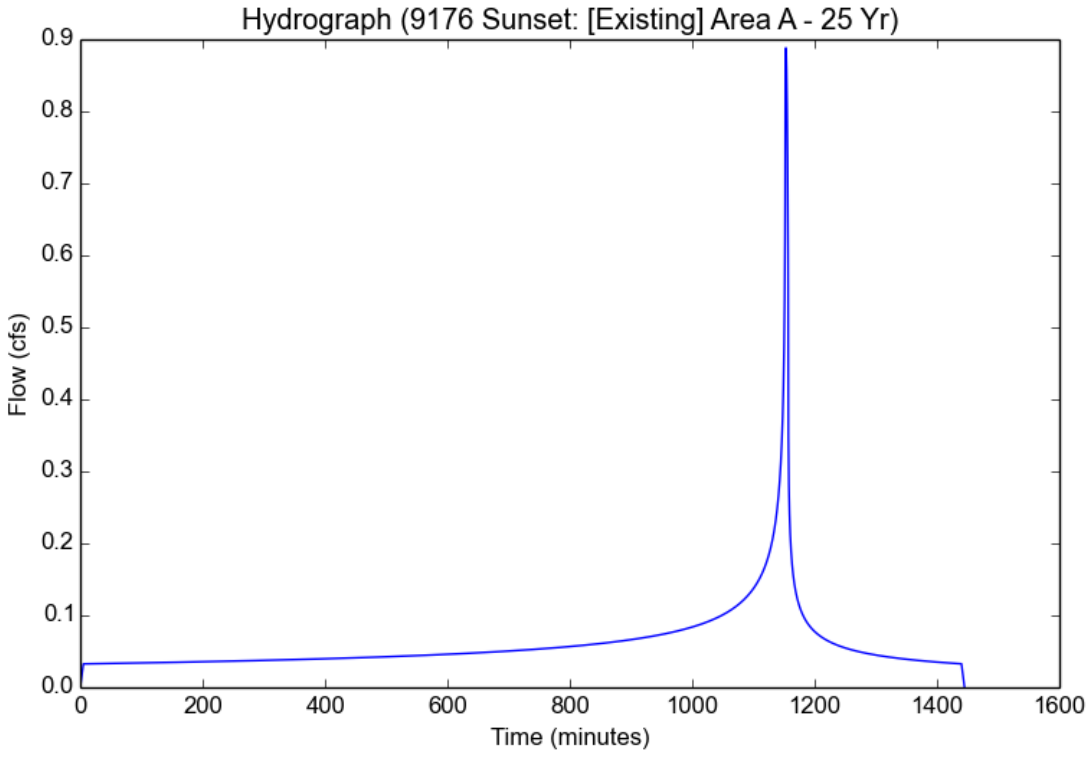
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area A/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area A - 25 Yr
Area (ac)	0.29
Flow Path Length (ft)	181.59
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.707
Peak Intensity (in/hr)	3.405
Undeveloped Runoff Coefficient (Cu)	0.8507
Developed Runoff Coefficient (Cd)	0.8995
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.8882
Burned Peak Flow Rate (cfs)	0.8882
24-Hr Clear Runoff Volume (ac-ft)	0.1222
24-Hr Clear Runoff Volume (cu-ft)	5321.1913



Peak Flow Hydrologic Analysis

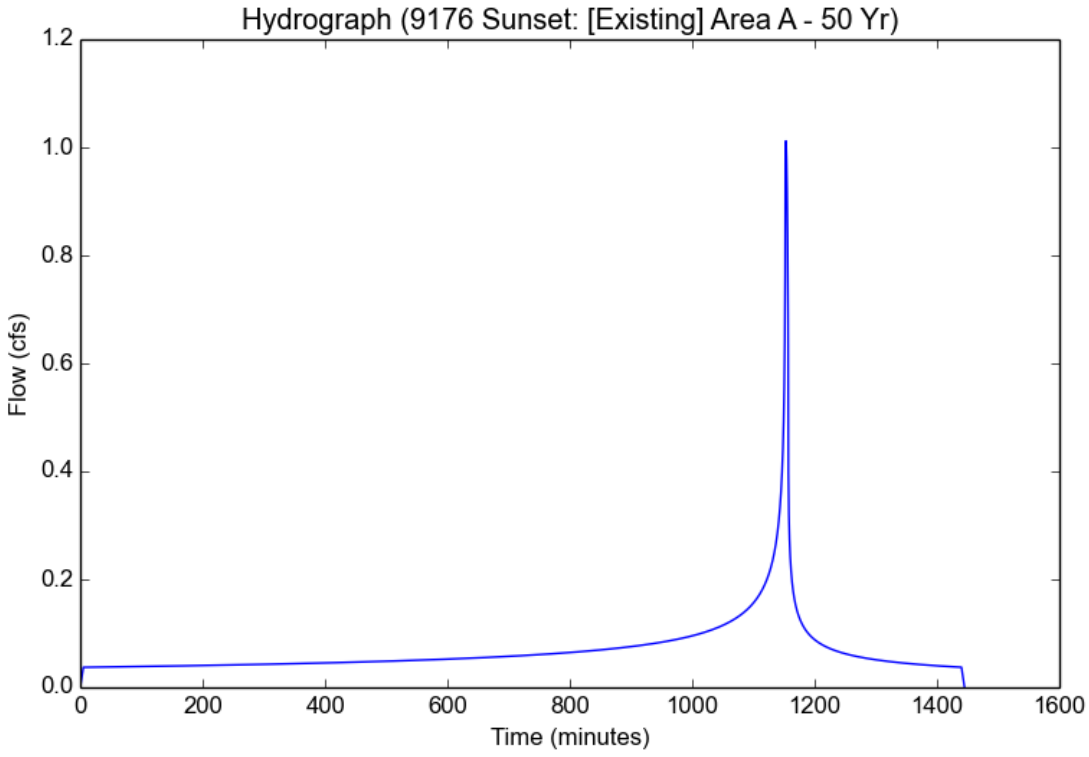
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area A/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area A - 50 Yr
Area (ac)	0.29
Flow Path Length (ft)	181.59
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.5
Peak Intensity (in/hr)	3.8781
Undeveloped Runoff Coefficient (Cu)	0.8718
Developed Runoff Coefficient (Cd)	0.8997
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0119
Burned Peak Flow Rate (cfs)	1.0119
24-Hr Clear Runoff Volume (ac-ft)	0.1392
24-Hr Clear Runoff Volume (cu-ft)	6061.7886



Peak Flow Hydrologic Analysis

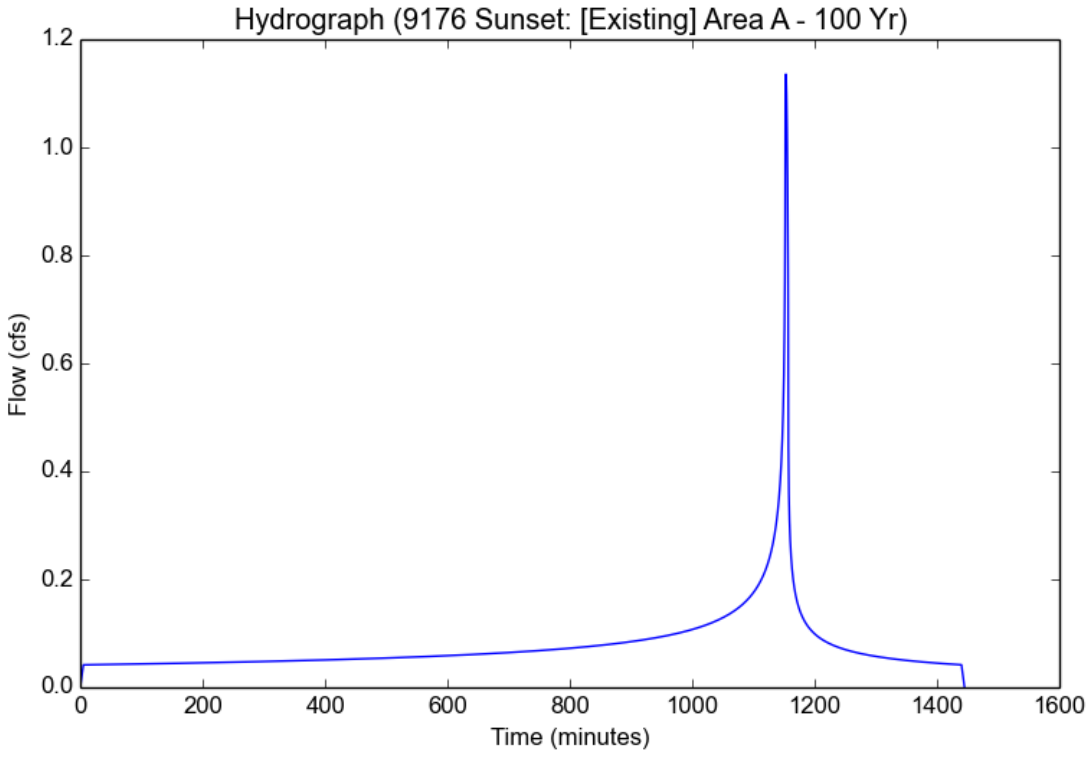
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area A/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area A - 100 Yr
Area (ac)	0.29
Flow Path Length (ft)	181.59
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	7.293
Peak Intensity (in/hr)	4.3512
Undeveloped Runoff Coefficient (Cu)	0.8899
Developed Runoff Coefficient (Cd)	0.8999
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.1355
Burned Peak Flow Rate (cfs)	1.1355
24-Hr Clear Runoff Volume (ac-ft)	0.1562
24-Hr Clear Runoff Volume (cu-ft)	6802.6926



Peak Flow Hydrologic Analysis

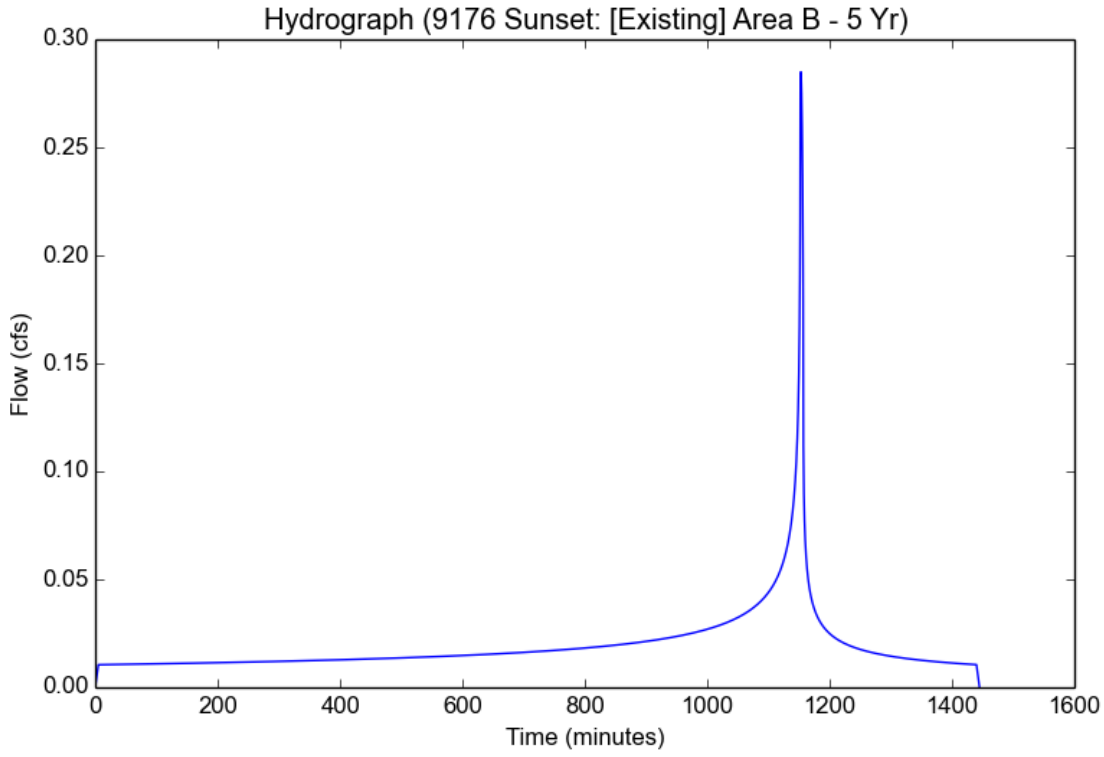
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area B/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area B - 5 Yr
Area (ac)	0.14
Flow Path Length (ft)	119.13
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	5-yr
Fire Factor	0
LID	False

Output Results

Modeled (5-yr) Rainfall Depth (in)	3.796
Peak Intensity (in/hr)	2.2648
Undeveloped Runoff Coefficient (Cu)	0.7614
Developed Runoff Coefficient (Cd)	0.8986
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.2849
Burned Peak Flow Rate (cfs)	0.2849
24-Hr Clear Runoff Volume (ac-ft)	0.0392
24-Hr Clear Runoff Volume (cu-ft)	1707.8678



Peak Flow Hydrologic Analysis

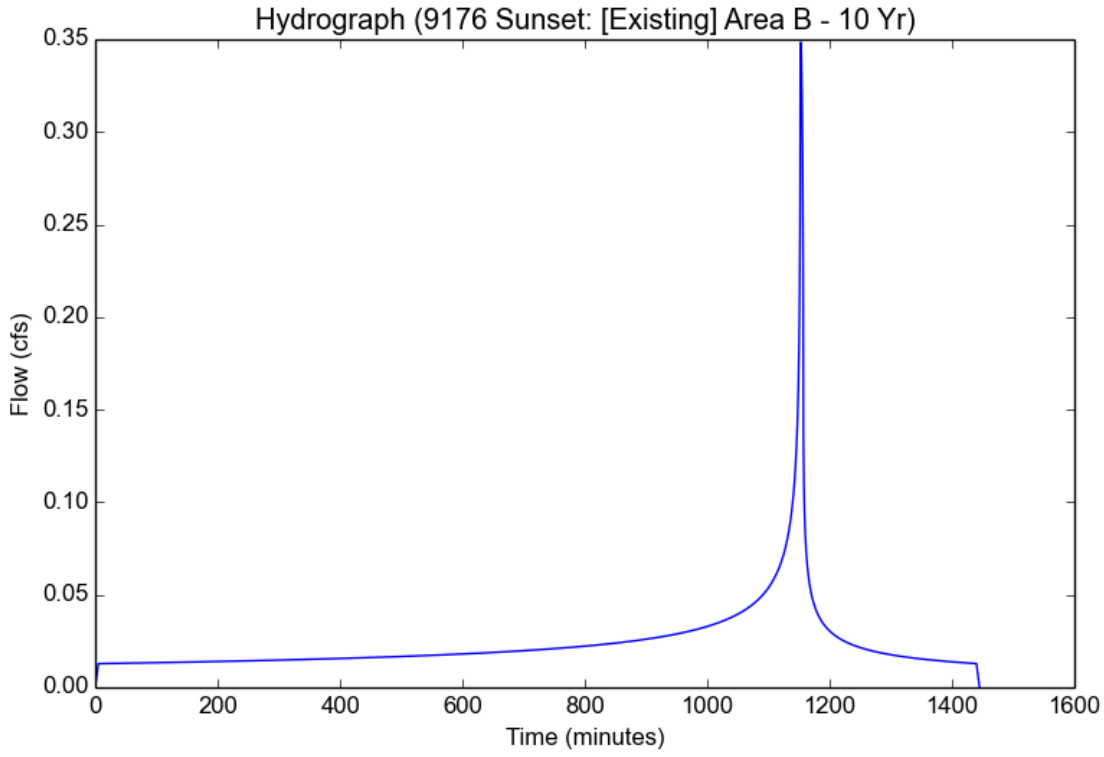
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area B/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area B - 10 Yr
Area (ac)	0.14
Flow Path Length (ft)	119.13
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	10-yr
Fire Factor	0
LID	False

Output Results

Modeled (10-yr) Rainfall Depth (in)	4.641
Peak Intensity (in/hr)	2.7689
Undeveloped Runoff Coefficient (Cu)	0.8061
Developed Runoff Coefficient (Cd)	0.8991
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.3485
Burned Peak Flow Rate (cfs)	0.3485
24-Hr Clear Runoff Volume (ac-ft)	0.0479
24-Hr Clear Runoff Volume (cu-ft)	2088.4701



Peak Flow Hydrologic Analysis

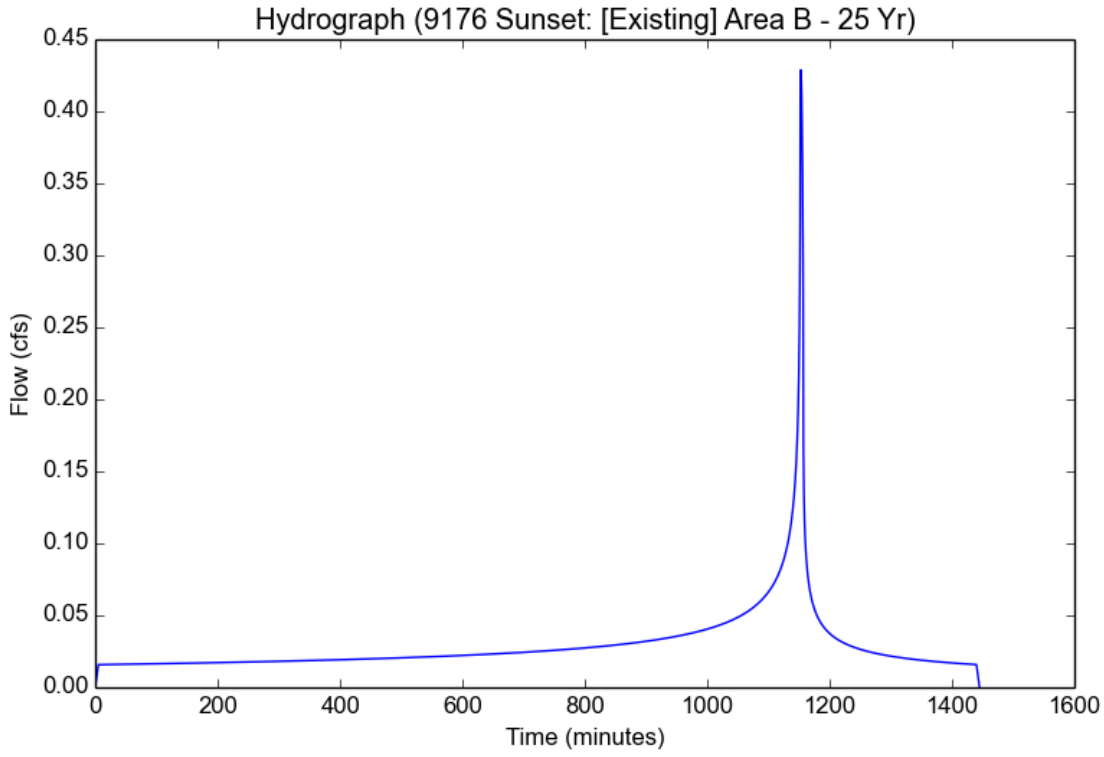
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area B/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area B - 25 Yr
Area (ac)	0.14
Flow Path Length (ft)	119.13
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.707
Peak Intensity (in/hr)	3.405
Undeveloped Runoff Coefficient (Cu)	0.8507
Developed Runoff Coefficient (Cd)	0.8995
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.4288
Burned Peak Flow Rate (cfs)	0.4288
24-Hr Clear Runoff Volume (ac-ft)	0.059
24-Hr Clear Runoff Volume (cu-ft)	2568.851



Peak Flow Hydrologic Analysis

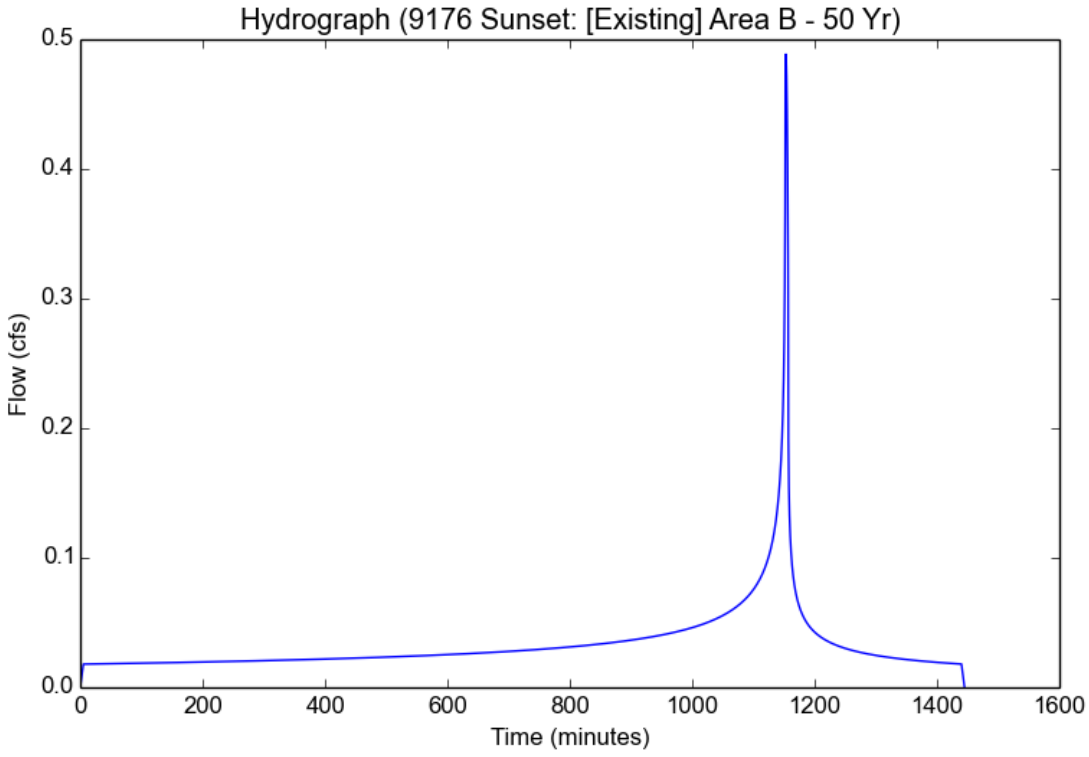
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area B/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area B - 50 Yr
Area (ac)	0.14
Flow Path Length (ft)	119.13
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	6.5
Peak Intensity (in/hr)	3.8781
Undeveloped Runoff Coefficient (Cu)	0.8718
Developed Runoff Coefficient (Cd)	0.8997
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.4885
Burned Peak Flow Rate (cfs)	0.4885
24-Hr Clear Runoff Volume (ac-ft)	0.0672
24-Hr Clear Runoff Volume (cu-ft)	2926.3807



Peak Flow Hydrologic Analysis

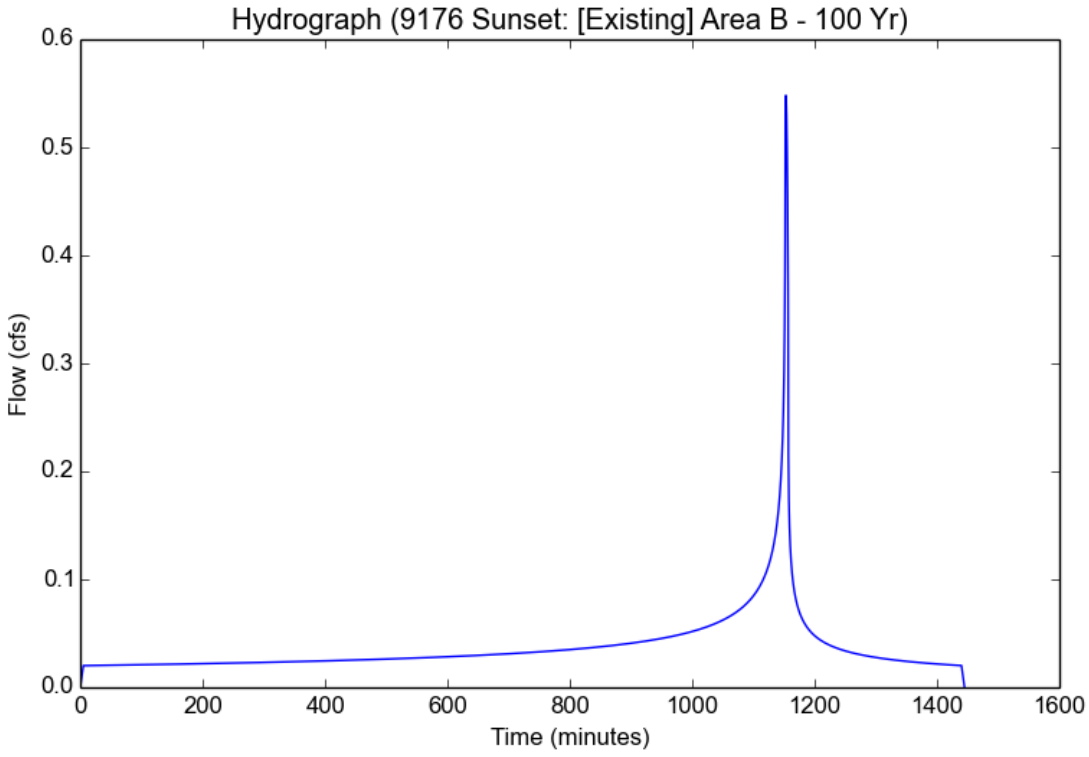
File location: W:/1LDL010100/ENGR/DOCS/SCEA/Water Resources Report/Final Report/Attachments/5 - HydroCalcs/Existing/Area B/9176 Sunset Blvd
Version: HydroCalc 0.3.0-beta

Input Parameters

Project Name	9176 Sunset
Subarea ID	[Existing] Area B - 100 Yr
Area (ac)	0.14
Flow Path Length (ft)	119.13
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	6.5
Percent Impervious	0.99
Soil Type	6
Design Storm Frequency	100-yr
Fire Factor	0
LID	False

Output Results

Modeled (100-yr) Rainfall Depth (in)	7.293
Peak Intensity (in/hr)	4.3512
Undeveloped Runoff Coefficient (Cu)	0.8899
Developed Runoff Coefficient (Cd)	0.8999
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.5482
Burned Peak Flow Rate (cfs)	0.5482
24-Hr Clear Runoff Volume (ac-ft)	0.0754
24-Hr Clear Runoff Volume (cu-ft)	3284.0585



Sunset Jewel Box: 9176 Sunset Blvd.
Planning Review - Response to Comments Letter
April 6, 2021

Utilities Report doesn't address domestic water conveyance by LADWP (it does address fire water conveyance by Beverly Hills)

(mentions that a Service Availability Report was submitted to LADWP, but doesn't mention LADWP response)

LADPW provides domestic water to the site- we need to know whether existing mains sufficient.

- ***Response***: LADWP has provided a Will Serve letter, dated March 2, 2021 and additionally provided the SAR reports, dated March 8, 2021. The Will-Serve letter and SAR reports have been added to the Appendix of the Utilities Tech Memo and relative text in the report has been updated. Please find attached the latest version of the report for Planning review.

Water Resources Technical Report:

the BMP text states (p. 19)

Prior to connection to the infiltration system, inline filters will be installed to remove any debris that enters the on-site piping system.

And also states the project will use a harvesting and reuse system involving a cistern and piping water for irrigation use.

Is the proposed capture and reuse system an infiltration system? Or is a separate infiltration system (e.g, planter drains) proposed?

Are other infiltration methods proposed other than planter drains? If so, what?

In the impact analysis the report states several times that the project will use *a capture and use and/or biofiltration system* (Section 6)

Would biofiltration be part of an infiltration system? Or part of the capture and reuse system?

- ***Response***: The design team has determined that the project will proceed with a capture and use LID system. The report has been revised accordingly. Please find attached for Planning review.

How do the pre-treatment settlement devices (p. 19) relate to the biofiltration units? Are they the same thing?

- ***Response***: In-line filters are recommended at stormwater capture locations (catch basins and trench drains) in order to prevent debris from entering the on-site piping system prior to direction to the capture and use system.

The report does not state whether infiltration has been determined suitable for this site; the report needs to address that if it is prescribing infiltration.

- ***Response***: Per the Geotechnical Engineering Investigation completed by Geotechnologies, dated December 14, 2020 under File Number 22055, "…infiltration of stormwater is not feasible for the project site." Report included for planning review. Section 3.4 Proposed Project Site Conditions, has been updated with language citing the infeasibility of infiltration on the Project site.

Note that the LID Plan (Gensler; see below) identifies biofiltration as a/the treatment BMP

- ***Response***: Biofiltration was considered as a potential option for the LID treatment system. Subsequently, the design team has decided to proceed using a capture and use system. The design report and design plans will be updated accordingly.

Where would the trench drains direct runoff to? To the cistern? To roadways?

- ***Response***: Trench drains will be directed to the onsite capture and use system when possible. As the project design is refined an LID plan will be created specifying all areas collected and directed to the rainwater harvesting storage. Any areas that can not be captured will be identified on the LID plan.

If to roadways, what treatment would be provided before discharge?

- ***Response***: Trench drains will all be specified with inline filters. Trench drains will all typically be directed to the capture and use system. In instances where the trench drain cannot be connected to the capture and use system and must discharge directly off-site, the trench drain filters are designed to capture sediment, debris and petroleum hydrocarbons from stormwater runoff prior to discharging.

Can Psomas provide a little more information on the inline filters, pre-treatment devices, and biofiltration systems?

- *Response*: Although the design requires significant refinement prior to finalized design decisions, please find attached specification sheets for trench drain, catch basin and down drain inline filters, and pretreatment devices. As mentioned above, biofiltration is no longer being considered for the on-site BMP system.

LID Plan (Gensler)

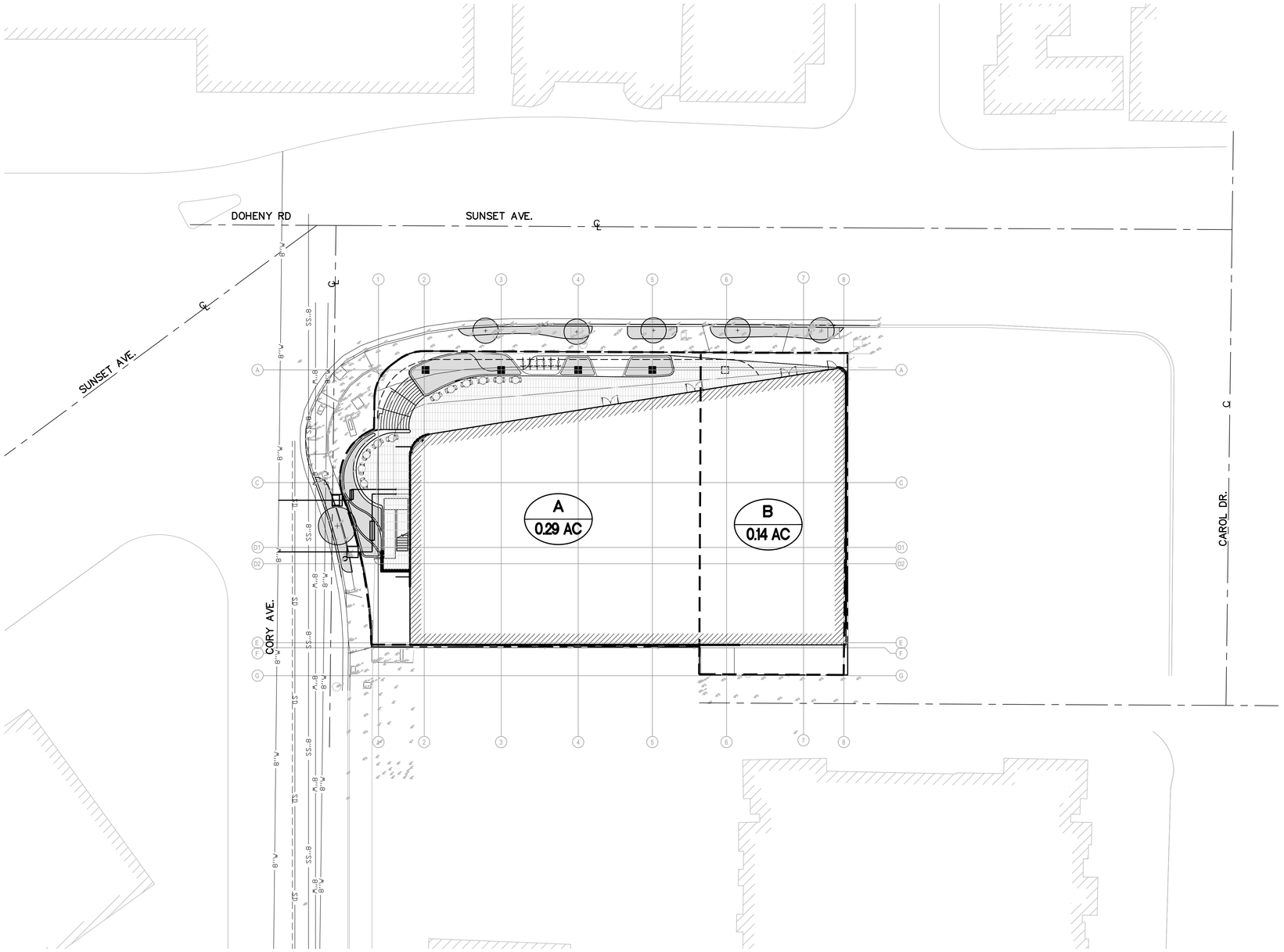
The LID plan identifies *biofiltration* in the *BMP Treatment Summary* table, but does not map or label where the biofiltration systems would be placed.

The LID Plan also does not map *any* of the BMPs mentioned in the Psomas Water Resources Technical Report.

The LID Plan uses symbols (black squares) that may represent some BMP but the squares are not identified.

Can Gensler revise the LID plan so it describes the type(s) and location(s) of BMPs?

- *Response*: Significant design coordination between the architecture, plumbing, and civil design teams will be required to fully refine the capture and use LID system. However, as cited in the Water Resources report "The Project would include the installation of building roof drain downspouts, area drains, and planter drains to collect roof and site runoff." The "first flush" of the collected runoff will be collected, pass through inline filtration systems and a minimum of the design capture volume will be stored in a harvesting system for on-site irrigation use. The stormwater retention is tentatively paces on Lower Level 02 (Sheet A2.01A of the Entitlement Set), however, please note that at this early stage of design, locations and sizes are subject to change.



LEGEND / HYDROLOGIC DATA:

- PROPERTY LINE
- PROPOSED DEDICATION LINE
- DRAINAGE AREA BOUNDARY
- FLOW PATH
- A / 0.290 AC — AREA DESIGNATION AND ACREAGE
- HARDSCAPE AREA
- EXEMPT LID TREATMENT AREA

GENERAL NOTES:

1. STENCIL AT ALL DRAINAGE INLETS (I.E. CATCH BASINS, TRENCH DRAINS). STENCIL PER DETAIL 1 HEREON.

DETAIL 1: DRAINAGE INLET STENCIL

NOT TO SCALE

BMP TREATMENT SUMMARY

SUB-AREA	TOTAL AREA (ACRES)	IMPERVIOUS AREA DESCRIPTION	IMPERVIOUS AREA (ACRES)	BMP TYPE	85TH PERCENTILE DESIGN CAPTURE VOLUME DCV (FT^3)	
					REQUIRED	AVAILABLE
AREA A	0.29	ROOF/ AMENTITY TERRACE HARDSCAPE	0.26	BIOFILTRATION	955 CU.FT.	955 CU.FT.
AREA B	0.14	ROOF/ AMENTITY TERRACE HARDSCAPE	0.13	BIOFILTRATION	460 CU.FT.	460 CU.FT.
TOTAL	0.43	ROOF/ AMENTITY TERRACE HARDSCAPE	0.39	BIOFILTRATION	1,415 CU.FT.	1,415 CU.FT.

20 10 0 20 40
GRAPHIC SCALE: 1"=20'

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www.psomas.com

△ Date	Description
12/23/2019	ENTITLEMENT PRE-SUBMITTAL
03/19/2020	ENTITLEMENT SUBMITTAL

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
Sunset Jewel Box

Project Number
05.2543.000

Description
LOW IMPACT DEVELOPMENT PLAN

Scale
1"=20'

C4.00