Appendix IS-5

Hydrology Report

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ARTISAN HOLLYWOOD PROJECT
TECHNICAL REPORT: WATER RESOURCES
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1. INTRODUCTION

1.1. PROJECT DESCRIPTION

Artisan Realty Advisors (the "Applicant") proposes the Artisan Hollywood Project on an approximately 1.55-acre site located at 1520-1542 N. Cahuenga Boulevard, 1523-1549 N. Ivar Avenue, and 6350 W. Selma Avenue in the Hollywood Community Plan area of the City of Los Angeles (the "Project Site"). The Project Site is generally bounded by Selma Avenue to the north, Ivar Avenue to the east, existing commercial buildings and associated parking to the south, and Cahuenga Boulevard to the west. The Project Site is currently improved with existing commercial buildings that have a floor area of 33,828 square feet as well as existing surface parking. The Project Site's existing commercial buildings would be retained, and the new development would replace the surface parking within the Project Site with a new 267,168-square foot high-rise building with 270 residential dwelling units and 6,790 square feet of ground floor commercial space, indoor and outdoor amenities, open space, and subterranean and above-grade parking for an overall 300,996-square foot project (the "Project"). The total Floor Area Ratio (FAR) on the Project Site would be up to 4.5 to 1. The new proposed multi-family residential and commercial uses would be provided within a 24-story building that would have a maximum height of approximately 286 feet. The Project Site's existing and proposed uses would be served by parking spaces that would be located in two above-grade levels and in four subterranean levels constructed in connection with the new development. The Project's new building would also include a residential lobby, a fitness center, recreational rooms, an amenity deck with private seating areas, an outdoor kitchen, pool/spa, landscaping, and a rooftop deck with a splash pool, landscaping, and seating.

1.2. SCOPE OF WORK

This report provides a description of the existing surface water hydrology, surface water quality, groundwater level, and groundwater quality at the Project Site. It also analyzes the Project's potential impacts related to surface water hydrology, surface water quality, groundwater level, and groundwater quality.

2. REGULATORY FRAMEWORK

2.1. SURFACE WATER HYDROLOGY

County of Los Angeles Hydrology Manual

Per the City of Los Angeles (City) Special Order No. 007-1299, December 3, 1999, the City has adopted 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 from a 50-year storm event.[1] The County also limits the allowable discharge into existing storm drain facilities based on the municipal separate storm sewer systems (MS4) Permit, which 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 require approval/review from the County Flood Control District department.

Los Angeles Municipal Code

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

2.2. SURFACE WATER QUALITY

Clean Water Act

The Clean Water Act (CWA) was first introduced in 1948 as the Water Pollution Control Act. The CWA 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 CWA 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 CWA forms the national framework for the management of water quality and the control of pollutant discharges. The CWA also sets forth a number of objectives in order to achieve the above-mentioned goals. These objectives include regulating pollutant and toxic pollutant discharges; providing for water quality that protects and fosters the propagation of fish, shellfish and wildlife; developing waste treatment management plans; and developing and implementing programs for the control of non-point sources of pollution.[2]

Since its introduction, major amendments to the CWA 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

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1 Los Angeles County Department of Public Works Hydrology Manual, January 2006, http://ladpw.org/wrd/publication/index.cfm, accessed October, 2019.

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

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 CWA 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 MS4s,[3] (2) construction sites of one to five acres, and (3) industrial facilities owned or operated by small municipal separate storm sewer systems. The NPDES permit program is typically administered by individual authorized states.

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

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

Federal Anti-Degradation Policy

The Federal Anti-Degradation Policy (40 Code of Federal Regulations 131.12) requires states to develop statewide anti-degradation policies and identify methods for implementing them. Pursuant to the Code of Federal Regulations (CFR), state anti-degradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality, where the quality of

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

[4] USEPA. U.S. Environmental Protection Agency - Clean Water Act. July 2011. http://www.epa.gov/lawsregs/laws/cwa.html, accessed October, 2019.

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 (CWC) 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 CWC, the SWRCB 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 Basin Plan must adhere to the policies set forth in the CWC and established by the SWRCB. The RWQCB is also given authority to include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

California Anti-Degradation Policy

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

California Toxics Rule

In 2000, the USEPA promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State. The USEPA promulgated this rule based on the USEPA's determination that the numeric criteria are necessary in the State to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the Los Angeles RWQCB (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 groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State's anti-degradation policy, and describes implementation programs to protect all waters in the Los Angeles Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.[5]

The Basin Plan is a resource for the LARWQCB 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. 2012-0006-DWQ known as "The General Permit" was adopted on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the 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

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[5] Los Angeles Regional Water Quality Control Board. LARWQCB Basin Plan. <http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/> accessed November, 2019.

6. Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects

7. Establish maintenance commitments on post-construction pollution control measures

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

Los Angeles County Municipal Storm Water System (MS4) Permit

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

On November 8, 2012, the LARWQCB adopted Order No. R4-2012-0175 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 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 other 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 Co-Permittees.

Stormwater Quality Management Program (SQMP)

In compliance with the 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;

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[6] State Water Resources Control Board. State Water Resources Control Board. July 2012, http://www.swrcb.ca.gov/water_issues/programs/npdes/.

[7] USEPA. U.S. Environmental Protection Agency - NPDES. July 2012, https://www.epa.gov/npdes.

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

1. General Requirements:

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

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

2. Best Management Practice Implementation:

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

3. Revision of the SQMP:

    - Permittees are required to revise the SQMP in order to comply with requirements of the RWQCB while complying with regional watershed requirements and/or waste load allocations for implementation of Total Maximum Daily Loads (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 for the following year.

6. Watershed Management Committees (WMCs):

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

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

7. Legal Authority:

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

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

On March 2, 2007, a motion was introduced by the City of Los Angeles City Council to develop a water quality master plan with strategic directions for planning, budgeting and funding to reduce pollution from urban runoff in the City of Los Angeles (City Council

File 07-0663). The Water Quality Compliance Master Plan for Urban Runoff (Master Plan) was developed by the Bureau of Sanitation, Watershed Protection Division in collaboration with stakeholders to address the requirements of this Council motion. The primary goal of the Master Plan is to help meet water quality regulations. Implementation of the Master Plan is intended over the next 20 to 30 years to result in cleaner neighborhoods, rivers, lakes and bays, augmented local water supply, reduced flood risk, more open space, and beaches that are safe for swimming. The Master Plan also supports the Mayor and Council's efforts to make Los Angeles the greenest major city in the nation.

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

- Water Quality Management Initiative, which describes how Water Quality Management Plans for each of the City's watershed and TMDL-specific Implementation Plans will be developed to ensure compliance with water quality regulations.
- The Citywide Collaboration Initiative, which recognizes that urban runoff management and urban (re)development are closely linked, requiring collaborations of many City agencies. This initiative requires the development of City policies, guidelines, and ordinances for green and sustainable approaches for urban runoff management.
- The Outreach Initiative, which promotes public education and community engagement with a focus on preventing urban runoff pollution.

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

City of Los Angeles Stormwater Program

The City of Los Angeles supports the policies of the Construction General Permit and the Los Angeles County NPDES permit through the *Development Best Management Practices Handbook. Part A Construction Activities,* 3rd Edition (Handbook), and associated ordinances were adopted in September 2004. *Part B Planning Activities*, 4th Edition was adopted in June 2011. The Handbook provides guidance for developers in complying with the requirements of the Development Planning Program regulations of the City's Stormwater Program. Compliance with the requirements of this Handbook is required by City of Los Angeles Ordinance No. 173,494. The Handbook and ordinances also have specific minimum BMP requirements for all construction activities and require dischargers whose construction projects disturb one acre or more of soil to prepare a SWPPP and file a Notice of Intent (NOI) with the SWRCB. The NOI informs the SWRCB of a particular

project and results in the issuance of a Waste Discharger Identification (WDID) number, which is needed to demonstrate compliance with the General Permit.

The City of Los Angeles implements the requirement to incorporate stormwater BMPs through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including storm water requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address storm water pollution prevention goals. The Standard Urban Stormwater Mitigation Plan (SUSMP) provisions that are applicable to new residential and commercial developments include, but are not limited to, the following:[8]

- Peak Storm Water Runoff Discharge Rate: Post-development peak storm water runoff discharge rates 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:

[8] City of Los Angeles Stormwater Program website, http://www.lastormwater.org/green-la/standard-urban-stormwater-mitigation-plan/; accessed October, 2019.

- 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 from one of the following:

- 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.

Los Angeles Municipal Code

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

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

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

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

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

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

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

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

Low Impact Development (LID)

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

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.[9]

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

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

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

The City of Los Angeles Bureau of Sanitation, Watershed Protection Division has adopted the LID standards as issued by the LARWQCB and the City of Los Angeles Department of Public Works. The 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 noted above, and as required by the CWC, the LARWQCB has adopted the 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 anti-degradation 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.

Safe Drinking Water Act (SDWA)

The Federal Safe Drinking Water 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 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 California Code of Regulations (CCR), Title 22, Division 4, Chapter 15, that are at least as stringent as those developed by the USEPA, as required by the federal SDWA.

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

3. ENVIRONMENTAL SETTING

3.1. SURFACE WATER HYDROLOGY

3.1.1. REGIONAL

The Project Site is located within the Ballona Creek Watershed (Watershed) in the Los Angeles Basin. The Watershed covers approximately 130 square miles in the coastal plain of the Los Angeles Basin. Its boundaries are the Santa Monica Mountains to the north, the Harbor Freeway (110) to the east, and the Baldwin Hills to the south. The watershed includes the cities of Beverly Hills, West Hollywood, portions of the cities of Los Angeles, Culver City, Inglewood and Santa Monica, unincorporated areas of Los Angeles County, and areas under the jurisdiction of Caltrans.

The watershed is highly developed: residential (64%), vacant/open space (17%), and commercial (8%) are the predominant land uses. Overall, 49% of the watershed is covered by roads, rooftops and other impervious surfaces.

Ballona Creek flows as an open channel for just under 10 miles from mid-Los Angeles (south of Hancock Park) through Culver City, reaching the Pacific Ocean at Playa del Rey (Marina del Rey Harbor). The Estuary portion (from Centinela Avenue to the outlet) is soft bottomed, while the remainder of the creek is lined in concrete. Ballona Creek is fed by a network of underground storm drains, which reaches north into Beverly Hills and West Hollywood. Major tributaries of the Creek and Estuary include Centinela Creek, Sepulveda Channel, and Benedict Canyon Channel.

The average dry weather flow at the Watershed's terminus in Playa del Rey is 25 cubic feet per second – a slow, steady flow. The average wet weather flow is ten times higher, or even more during large storms.[10] Refer to Figure 1 for Ballona Creek Watershed Map.

3.1.2. LOCAL

There are two existing catch basins located near the Project Site. One catch basin is located on the south side of Selma Avenue near the corner of Ivar Avenue and the second catch basin is located on the west side of Ivar Avenue near the corner of Selma Avenue. The Project Site currently discharges stormwater to the curb face near the south east side of the site on Ivar Avenue, where it is conveyed further south to a catch basin located on the east side of Ivar Avenue near the corner of Sunset Boulevard. From there, stormwater is conveyed through various underground pipe networks into Ballona Creek. Ballona Creek flows generally southwest, ultimately discharging into the Pacific Ocean at the Santa Monica Bay. Ballona Creek is designed to discharge to Santa Monica Bay up to approximately 71,400 cubic feet of stormwater per second from a 50-year frequency storm event.[11]

3.1.3. ON SITE

The Project Site is approximately 32,129 sq. ft. (0.74 acres) and currently functions as an at grade parking lot for the surrounding businesses.

Generally, the Project Site slopes from north to south, and the grade change is approximately 4.5 feet. The existing Project Site has been analyzed as one drainage area. Figure 2 illustrates the existing on-site drainage pattern. Table 1 below shows the existing volumetric flow rate generated by a 50-year storm event.

Table 1- Existing Drainage Stormwater Runoff Calculations

Drainage Area	Area (Acres)	Q50 (cfs) (volumetric flow rate measured in cubic feet per second)
DA-1	0.74	2.36
TOTAL	**0.74**	**2.36**

3.2. SURFACE WATER QUALITY

3.2.1. REGIONAL

As described above, the Project Site lies within the Ballona Creek Watershed. Ballona Creek is considered impaired as a Warm Freshwater Habitat and for Water Contact Recreation. Causes of impairment listed for Ballona Creek under California's Clean Water

[10] City of Los Angeles Stormwater Program website, http://www.lastormwater.org/about-us/about-watersheds/ballona-creek/, accessed October, 2019.

[11] http://www.ladpw.org/wmd/watershed/bc/; accessed October, 2019

Act Section 303(d) List include copper, coliform bacteria, lead, toxicity, trash, viruses (Enteric), and zinc, for all of which TMDLs have been completed; and cyanide, for which a TMDL is still needed.[12]

3.2.2. LOCAL

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

3.2.3. ON SITE

A preliminary site investigation indicated that Best Management Practices (BMPs) were not present.

3.3. GROUNDWATER HYDROLOGY

3.3.1. REGIONAL

Groundwater use for domestic water supply is a major beneficial use of groundwater basins in Los Angeles County. The City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin (Basin). The Basin is comprised of the Hollywood, Santa Monica, Central, and West Coast Groundwater Subbasins. Groundwater flow in the Basin is generally south-southwesterly and may be restricted by natural geological features. Replenishment of groundwater basins occurs mainly by percolation of precipitation throughout the region via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins, as well as injection wells designed to pump freshwater along specific seawater barriers to prevent the intrusion of salt water. Refer to Figure 3 for the groundwater basin exhibit.

3.3.2. LOCAL

The Project Site specifically overlies the Hollywood Subbasin. The Hollywood Subbasin is bounded on the north by the Santa Monica Mountains and the Hollywood fault, on the east by 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.[13]

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[12] https://iaspub.epa.gov/waters10/attains_waterbody.control?p_au_id=CAR4051300019980918142302&p_list_id=CAR4051300019980918142302&p_cycle=2016; accessed November, 2019.

[13] http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/4-11.02.pdf

Groundwater in the Subbasin is replenished by percolation of precipitation and stream flow from the Santa Monica Mountains to the north. Over time, urbanization has decreased the amount of pervious surfaces limiting natural recharge through direct percolation.

3.3.3. On-Site

The portion of the Project Site that will be demolished is currently being used as an at-grade parking lot that serves the surrounding businesses. Therefore, current conditions do not promote, nor contribute to groundwater recharge.

As described in the Report of Geotechnical Evaluation for Entitlement Documents by Wood Environment and Infrastructure Solutions, Inc., groundwater was encountered in prior exploratory borings at depth of 61 and 63 feet below ground surface. Furthermore, the California Geological Survey, formerly the California Division of Mines and Geology (CDMG), the historic-high groundwater level was between 60 and 80 feet below ground surface[14]

Considering the historic high groundwater level at a depth of 60-80 feet, and the depth of the proposed structure of 48 feet, perched groundwater is unlikely to be encountered during construction. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity.

3.4. Groundwater Quality

3.4.1. Regional

As stated above, the City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the LARWQCB. According to LARWQCB's Basin Plan, water quality objectives applying to all ground waters of the region include bacteria, chemical constituents and radioactivity, mineral quality, nitrogen (nitrate, nitrite), and taste and odor.[15]

3.4.2. Local

As stated above, the Project Site specifically overlies the Hollywood Subbasin. Based upon LARWQCB's Basin Plan, the Hollywood Subbasin is not adjucated. The City of Beverly Hills manages the Hollywood Subbasin through local ordinances and is the only major contributor.

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[14] Report of Geotechnical Evaluation for Entitlement Documents – Proposed High-Rise Development Project – 1520 North Cahuenga Boulevard, Hollywood District, Los Angeles, California, June 19, 2019

[15] Los Angeles Regional Water Quality Control Board, Basin Plan, March 2013, http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/electronics_documents/Final%20Chapter%203%20Text.pdf accessed May, 2019.

3.4.3. ON-SITE

The existing Project Site is fully improved as an existing paved parking lot, and therefore does not contribute to groundwater recharge. Therefore, the existing Project Site does not contribute to groundwater pollution or otherwise adversely impact groundwater quality.

Other types of risk such as underground storage tanks have a greater potential to impact groundwater. Ramboll prepared a Phase I Environment Site Assessment Report (Phase I ESA). The report noted that no underground storage tanks were present at the site.[16]

4. SIGNIFICANCE THRESHOLDS

4.1. SURFACE WATER HYDROLOGY

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

Would the project:

- 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:
    - Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
    - Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
    - Result in substantial erosion or siltation on- or off-site;
    - 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
    - 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.
    - Impede or redirect flood flows

[16] Phase I Environmental Site Assessment Space 15 Twenty 1520-1542 North Cahuenga Boulevard and 1535 Ivar Avenue, Hollywood, California.

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

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

4.2. SURFACE WATER QUALITY

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

Would the project:

- Violate any water quality standard or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- 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 substantial erosion or siltation on- or off-site;
    - 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;
    - 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;

In the context of the above questions from Appendix G, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on surface water quality if it would result in discharges that would create pollution, contamination or nuisance, as defined in Section 13050 of the CWC or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body.

The CWC includes the following definitions:

- "Pollution" means an alteration of the quality of the waters of the state to a degree which unreasonably affects either of the following: 1) the waters for beneficial uses or 2) facilities which serve these beneficial uses. "Pollution" may include "Contamination".
- "Contamination" means an impairment of the quality of the waters of the state by waste to a degree, which creates a hazard to the public health through poisoning or though the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.
- "Nuisance" means anything which meets all of the following requirements: 1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; 2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; and 3) occurs during, or as a result of, the treatment or disposal of wastes.[17]

4.3. GROUNDWATER HYDROLOGY

Appendix G of the CEQA Guidelines provides a sample question that addresses impacts with regard to groundwater. This question is as follows:

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;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

In the context of the above question from Appendix G, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on groundwater if it would:

- Change potable water levels sufficiently to:
  - Reduce the ability of a water utility to use the groundwater basin for public water supplies, conjunctive use purposes, storage of imported water, summer/winter peaking, or to respond to emergencies and drought;
  - Reduce yields of adjacent wells or well fields (public or private); or
  - Adversely change the rate or direction of flow of groundwater; or

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

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

4.4. GROUNDWATER QUALITY

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

Would the project:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan;

In the context of the above questions from Appendix G pertaining to groundwater quality, the *L.A. CEQA Thresholds Guide* states that a project would normally have a significant impact on groundwater quality if it would:

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

5. METHODOLOGY

5.1. SURFACE WATER HYDROLOGY

The Project Site is located within the Hollywood Community Plan area of the City of Los Angeles (City), and drainage collection, treatment and conveyance are regulated by the City. Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County Department of Public Works (LACDPW) Hydrology Manual as its basis of design for storm drainage facilities. The LACDPW Hydrology Manual requires projects to have drainage facilities that meet the Urban Flood level of protection. The Urban Flood is runoff from a 25-year frequency design storm falling on a saturated watershed. A 25-year frequency design storm has a probability of 1/25 of being equaled or exceeded in any year. The *L.A. CEQA Thresholds Guide*, however, establishes the 50-year frequency design storm event as the threshold to analyze potential impacts on surface water hydrology as a result of development. To provide a more conservative analysis, this report analyzes the larger storm event threshold, i.e., the 50-year frequency design storm event.

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 has developed a time of concentration calculator, Hydrocalc, to automate time of concentration calculations as well as the peak runoff rates and volumes using the Modified Rational Method design criteria as outlined in the Hydrology Manual. The data input requirements include: sub-area size, soil type, land use, flow path length, flow path slope and rainfall isohyet. The Hydrocalc Calculator was used to calculate the storm water peak runoff flow rate for the Project conditions by evaluating an individual sub-area independent of all adjacent subareas. See Figure 4 for the Hydrocalc Calculator results and Figure 5 for the Isohyet Map.

5.2. SURFACE WATER QUALITY

5.2.1. CONSTRUCTION

Considering the land disturbing activities will be less than an acre, the Project is not required to file a SWPPP with the State. However, City of Los Angeles requires an erosion control plan (Local SWPPP) to be in place for the full duration of construction. The Local SWPPP will consist of construction BMPs including, but not limited to, sand bag barriers, inlet protection, regular street sweeping, controlled entrance/exit with rumble plates, dust control, and designated staging areas for materials and equipment. The Local SWPPP shall begin when construction commences, before any site clearing and grubbing or demolition activity. During construction, the Local SWPPP will be referred to regularly and amended as changes occur throughout the construction process.

5.2.2. OPERATION

The Project will be required to implement the City's LID standards.[18] Under section 3.1.3. of the LID Manual, post-construction stormwater runoff from a new development must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs onsite for at least the volume of water produced by the greater of the 85th percentile storm or the 0.75 inch storm event. The LID Manual prioritizes the selection of BMPs used to comply with stormwater mitigation requirement. The order of priority is:

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

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

The historic high groundwater level is roughly 60-80 feet below the ground surface.[19] Taking the historic high groundwater level and the Project's planned depth of approximately 48 feet below the ground surface, infiltration may be feasible.

Based on the size of the Project Site, the LID system implemented would be required to mitigate approximately 15,568 gallons generated by the design storm event. See Figure 6 for LID calculations.

If infiltration is determined to be infeasible, then capture and use would be required. Approximately 2,315 square feet of landscaping would be required to justify the feasibility of a stormwater Capture and Use system per LID guidelines.

If capture and use is later determined to be infeasible, the Project would then be required to implement a High Efficiency Biofiltration/Bioretention Systems. In that case, 1,921 square feet of Biofiltration Planter would be required on the structure. See Figure 6 for LID calculations.

According to the City's LID Handbook, the mitigated volume generated from the greater of the 85th percentile storm and the 0.75-inch storm event is calculated as follows:

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

[19] Report of Geotechnical Evaluation for Entitlement Documents – Proposed High-Rise Development Project – 1520 North Cahuenga Boulevard, Hollywood District, Los Angeles, California, June 19, 2019

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

Where:

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

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

5.3. GROUNDWATER

The significance of this Project as it relates to the level of the underlying groundwater table of the Central Groundwater Subbasin included a review of the following considerations:

Analysis and Description of the Project's Existing Condition

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

Analysis of the Proposed Project Impact on Groundwater Level

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

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

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

6. PROJECT IMPACT ANALYSIS

6.1. CONSTRUCTION

6.1.1. SURFACE WATER HYDROLOGY

Construction activities for the Project would include demolition of the surface parking lot, excavating down approximately 48 feet for subterranean parking, building up of the structure, and constructing hardscape and landscape around the building. The mass excavation for the proposed subterranean parking is estimated to generate approximately 69,333 cubic yards of net export. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Also, exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff.

As noted above, the Project would implement an Erosion Control Plan that specifies BMPs and erosion control measures to be used during construction to manage runoff flows and prevent pollution. BMPs would be designed to reduce runoff and pollutant levels in runoff during construction. The Erosion Control Plan measures are designed to (and would in fact) contain and treat, as necessary, stormwater or construction watering on the Project Site so runoff does not impact off-site drainage facilities or receiving waters. Construction activities are temporary and flow directions and runoff volumes during construction will be controlled.

In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to reduce sedimentation and erosion. Thus, through compliance with the Local SWPPP, implementation of BMPs, and compliance with applicable City grading regulations, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion, siltation, or flooding on- or off-site. Similarly, adherence to standard compliance measurements in construction activities would ensure that construction of the Project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. As construction activities would be limited to the Project Site, such activities would not conflict with implementation of a water quality control plan. Therefore, construction-related impacts to surface water hydrology would be less than significant.

6.1.2. SURFACE WATER QUALITY

Construction activities such as earth moving, maintenance/operation of construction equipment, potential dewatering, and handling/storage/disposal of materials could contribute to pollutant loading in stormwater runoff.

As discussed in Section 6.1.3 below, the Project is not expected to require dewatering during construction. Dewatering operations are practices that discharge non-stormwater, such as groundwater, that must be removed from a work location to proceed with construction into the drainage system. 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 the NPDES permit. Any such temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations.

With implementation of the Erosion Control Plan, site-specific BMPs would reduce or eliminate the discharge of potential pollutants from stormwater runoff. In addition, the Project Applicant would be required to comply with City grading permit regulations and inspections to reduce sedimentation and erosion. Construction of the Project would not result in discharge that would cause: (1) pollution which would alter the quality of the water of the State (i.e., Ballona Creek) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the water of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Furthermore, construction of the Project would not result in discharges that would cause regulatory standards to be violated in the Ballona Creek Watershed. The Project would also not provide substantial additional sources of polluted runoff, nor would it conflict with the implementation of a water quality control plan. In addition, implementation of the Erosion Control Plan would ensure that construction activities would not result in substantial erosion or siltation on- or off-site, or risk release of other pollutants due to inundation. Therefore, temporary construction-related impacts on surface water quality would be less than significant.

6.1.3. GROUNDWATER HYDROLOGY

As stated above, construction activities for the Project would include excavating down approximately 48 feet for subterranean parking, building up the structure, and hardscape and landscape around the structure. Based on the Seismic Hazard Zone Report, the historic high groundwater level in the vicinity of the Project Site is roughly 60-80 feet below grade.[20] The Project's proposed excavation wouldn't reach this depth; therefore groundwater wouldn't be encountered during construction that would require either temporary or permanent dewatering operations. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including with all relevant NPDES requirements related to construction and discharges from dewatering operations. Therefore, the Project would not substantially deplete groundwater supplies in a manner that would result in a net

[20] Report of Geotechnical Evaluation for Entitlement Documents – Proposed High-Rise Development Project – 1520 North Cahuenga Boulevard, Hollywood District, Los Angeles, California, June 19, 2019

deficit in aquifer volume or lowering of the local groundwater table and impacts related to groundwater would be less than significant.

6.1.4. GROUNDWATER QUALITY

As discussed above, the Project would include excavations for subterranean parking. The Project would also result in a net export of approximately 69,333 cubic yards of soil. Although not anticipated at the Project Site, any contaminated soils found would be captured within that volume of excavated material, removed from the Project Site, and remediated at an approved disposal facility in accordance with regulatory requirements.

During on-site grading and building construction, hazardous materials, such as fuels, paints, solvents, and concrete additives, could be used and would therefore require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could decrease the opportunity for hazardous materials releases into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, would reduce the potential for the construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well. In addition, as there are no groundwater production wells or public water supply wells within one mile of the Project Site, construction activities would not be anticipated to affect existing wells. Therefore, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality. As construction activities are not expected to encounter existing groundwater supplies, it would not conflict with the implementation of a sustainable groundwater management plan. Therefore, impacts on groundwater quality would be less than significant.

6.2. OPERATION

6.2.1. SURFACE WATER HYDROLOGY

Although the Project will have a considerable amount of landscaping, it is supported mostly by structure below which prohibits stormwater from percolating into the ground. Therefore, the Project condition at full buildout has been analyzed as being 87% impervious (refer to Figure 7 for illustration of proposed drainage concept). Accordingly, there is a decrease in drainage Stormwater runoff due to the area being developed with less surface area for water to drain from.

Table 2 shows the proposed 50-year frequency design storm event peak flow rate within the Project Site. Table 3 shows a comparison of the pre- and post-peak flow rates, and indicates that there would be a decrease in stormwater runoff.

Table 2- Proposed Drainage Stormwater Runoff Calculations		
Drainage Area	Area (Acres)	Q50 (cfs) (volumetric flow rate measured in cubic feet per second)
DA-1	0.74	2.35
TOTAL	0.74	2.35

Table 3 – Existing and Proposed Drainage Stormwater Runoff Comparison			
Project Site Area (Acres)	Pre-Project Q_{50} (cfs) (volumetric flow rate measured in cubic feet per second)	Post-Project Q_{50} (cfs) (volumetric flow rate measured in cubic feet per second)	Incremental Decrease from Existing to Proposed Condition
0.74	**2.36**	**2.35**	**- 0.42%**

In the existing condition, the paved parking lot sheet flows to a valley gutter located in the drive isle. A catch basin is located at the southern end of the valley gutter, which collects and discharges the stormwater under the public sidewalk to the curb face with no means of treatment. The post-Project condition will manage stormwater flow to drains, which will be directed to the on-site storage tank or filtration planter. Therefore, the Project would not cause flooding during a 50-year storm event or result in a permanent adverse change to the movement of surface water on the Project Site.

As noted above, the Project would not increase the rate or volume of stormwater runoff. In other words, the Project would not substantially reduce or increase the amount of surface water discharged into the existing infrastructure or any waterbody, and would not substantially alter the pattern or quantity of runoff. Therefore, impacts related to stormwater infrastructure improvements would be less than significant.

The LID requirements for the Project Site would outline the stormwater treatment post-construction BMPs required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's Stormwater Program. The Project BMPs will control stormwater runoff with no increase in runoff resulting from the Project. Refer to Exhibit 1 for typical LID BMPs. The Project would not impact existing storm drain infrastructure serving the Project Site and runoff would continue to follow the same discharge paths and drain to the same stormwater systems.

The Project would not trigger any of the thresholds listed in Section 4.1. Therefore, potential operational impacts to site surface water hydrology would be less than significant.

6.2.2. SURFACE WATER QUALITY

The Project Site will not increase concentrations of the items listed as constituents of concern for the Ballona Creek Watershed.

Due to the incorporation of the required LID BMP(s)[21], operation of the Project would not result in discharges that would cause: (1) pollution which would alter the quality of the waters of the State (i.e., Ballona Creek) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the waters of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes.

As is typical of most urban developments, stormwater runoff from the Project Site has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project are sediment, nutrients, pesticides, metals, pathogens, and oil and grease. The pollutants listed above are expected to, and would in fact, be mitigated through the implementation of approved LID BMPs.

Furthermore, operation of the Project would not result in discharges that would cause regulatory standards to be violated. The existing Project Site is approximately 100 percent impervious. The Project will reduce the percentage of impervious surface. Additionally, a portion of the Project Site will be allocated for stormwater BMPs specifically intended to control and treat stormwater runoff in compliance with LID requirements. As stated above, it appears the existing site discharges without any means of treatment. However, the Project would include the installation of LID BMPs, which would mitigate at minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event. The installed BMP systems will be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater which bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way. As such, the Project would not interfere with the implementation of a water quality control plan.

Therefore, with the implementation LID BMPs, there will be no operational impacts on surface water quality.

6.2.3. GROUNDWATER HYDROLOGY

Since the Project will reduce the imperviousness of the site, the potential for groundwater recharge could be improved. Therefore, the Project's potential impact on groundwater recharge is less than significant.

As discussed above, Project development would require excavations of up to 48 feet for the subterranean parking. As described in the Geotechnical Investigation for the Project

[21] https://www.lastormwater.org/wp-content/files_mf/lidmanualfinal.pdf

Site, the historic high groundwater level in the vicinity of the Project site is roughly 60-80 feet below grade. Due to the fact that the Project's excavation wouldn't reach this depth, it is expected that groundwater wouldn't be encountered during construction that would require either temporary or permanent dewatering operations. If groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with the NPDES permit. The temporary system would comply with all relevant NPDES requirements related to construction and discharges from dewatering operations. Furthermore, the closest well or spreading ground is approximately 0.80 miles away from the Project Site and the Project would not include new injection or supply wells.

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

6.2.4. GROUNDWATER QUALITY

The Project does not include the installation or operation of water wells, or any extraction or recharge system that is in the vicinity of the coast, an area of known groundwater contamination or seawater intrusion, a municipal supply well or spreading ground facility.

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking underground storage tanks. No underground storage tanks are currently operated or anticipated to be operated by the Project. In addition, while the development of new building facilities would slightly increase the use of on-site hazardous materials as described above, compliance with all applicable existing regulations at the Project Site regarding the handling and potentially required cleanup of hazardous materials 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. Furthermore, as described above, operation of the Project would not require extraction from the groundwater supply based on the depth of excavation for the proposed uses and the depth of groundwater below the Project Site.

The Project is not anticipated to result in violations of any water quality standards or waste discharge requirements or otherwise substantially degrade groundwater quality. Additionally, the Project does not involve drilling to or through a clean or contaminated aquifer. Therefore, the Project's potential impact on groundwater recharge is less than significant.

6.3. CUMULATIVE IMPACT ANALYSIS

6.3.1. SURFACE WATER HYDROLOGY

The geographic context for the cumulative impact analysis on surface water hydrology is the Ballona Creek 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. The City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure sufficient local and regional infrastructure is available to accommodate stormwater runoff. Similar to the Project, related projects are located on sites that are fully developed and impervious. Any new development on the related project sites would need to implement LID BMPs to meet the City's requirements. Implementation of the LID BMPs would, at a minimum, maintain existing runoff conditions. Therefore, the impact of the Project combined with the related projects on surface water hydrology would be less than significant.

6.3.2. SURFACE WATER QUALITY

Future growth in the Ballona Creek Watershed would be subject to NPDES requirements relating to water quality for both construction and operation. In addition, since the Project is located in a highly urbanized area, future land use changes or development are not likely to cause substantial changes in regional surface water quality. As noted above, the Project does not have an adverse impact on water quality, and would in fact improve the quality of on-site flows due to the introduction of new BMPs that would collect, treat, and discharge flows from the Project Site (which are not being treated under existing conditions). Also, it is anticipated that the Project and other future development projects would also be subject to LID requirements and implementation of measures to comply with TMDLs. Increases in regional controls associated with other elements of the MS4 Permit would improve regional water quality over time. The Project combined with the related projects would comply with all applicable laws, rules, and regulations, and therefore, cumulative impacts to surface water quality would be less than significant.

6.3.3. GROUNDWATER HYDROLOGY

The geographic context for the cumulative impact analysis on groundwater level is the Hollywood Subbasin. The Project in conjunction with forecasted growth in the region above the Hollywood Subbasin could cumulatively increase groundwater demand. However, as noted above, no water supply wells, spreading grounds, or injection wells are located within a one-mile radius of the Project Site and the Project would not have an adverse impact on groundwater level. Any calculation of the extent to which the related projects would extract or otherwise directly utilize groundwater would be speculative. Therefore, potential cumulative impacts associated with the Project on groundwater hydrology would be less than significant.

Furthermore, as previously discussed, implementation of the Project would result in a reduction in impervious surface area. Development of the related projects could result in changes in impervious surface area within their respective project sites. While any calculation of the extent to which the related projects would increase or decrease impervious or pervious surfaces that might affect groundwater hydrology would be speculative, the development of such related projects would be subject to review and approval pursuant to all applicable regulatory requirements, including any required

mitigation of potential groundwater hydrology impacts. In addition, as the related projects are located in a highly urbanized area, any potential reduction in groundwater recharge due to the overall net change in impervious area within the area encompassed by the related project sites would be minimal in the context of the regional groundwater basin, and would thus not result in a significant cumulative effect to groundwater hydrology. Therefore, cumulative impacts to groundwater hydrology would be less than significant.

6.3.4. GROUNDWATER QUALITY

Future growth in the Hollywood Subbasin would be subject to LARWQCB requirements relating to groundwater quality. In addition, since the Project Site is located in a highly urbanized area, future land use changes or development are not likely to cause substantial changes in regional groundwater quality. As noted above, the Project does not have an adverse impact on groundwater quality. Also, it is anticipated that, like the Project, other future development projects would also be subject to LARWQCB requirements and implementation of measures to comply with TMDLs in addition to requirements of California Code of Regulations, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act. The Project would comply with all applicable laws, rules, and regulations, therefore cumulative impacts to groundwater quality would be less than significant.

7. LEVEL OF SIGNIFICANCE

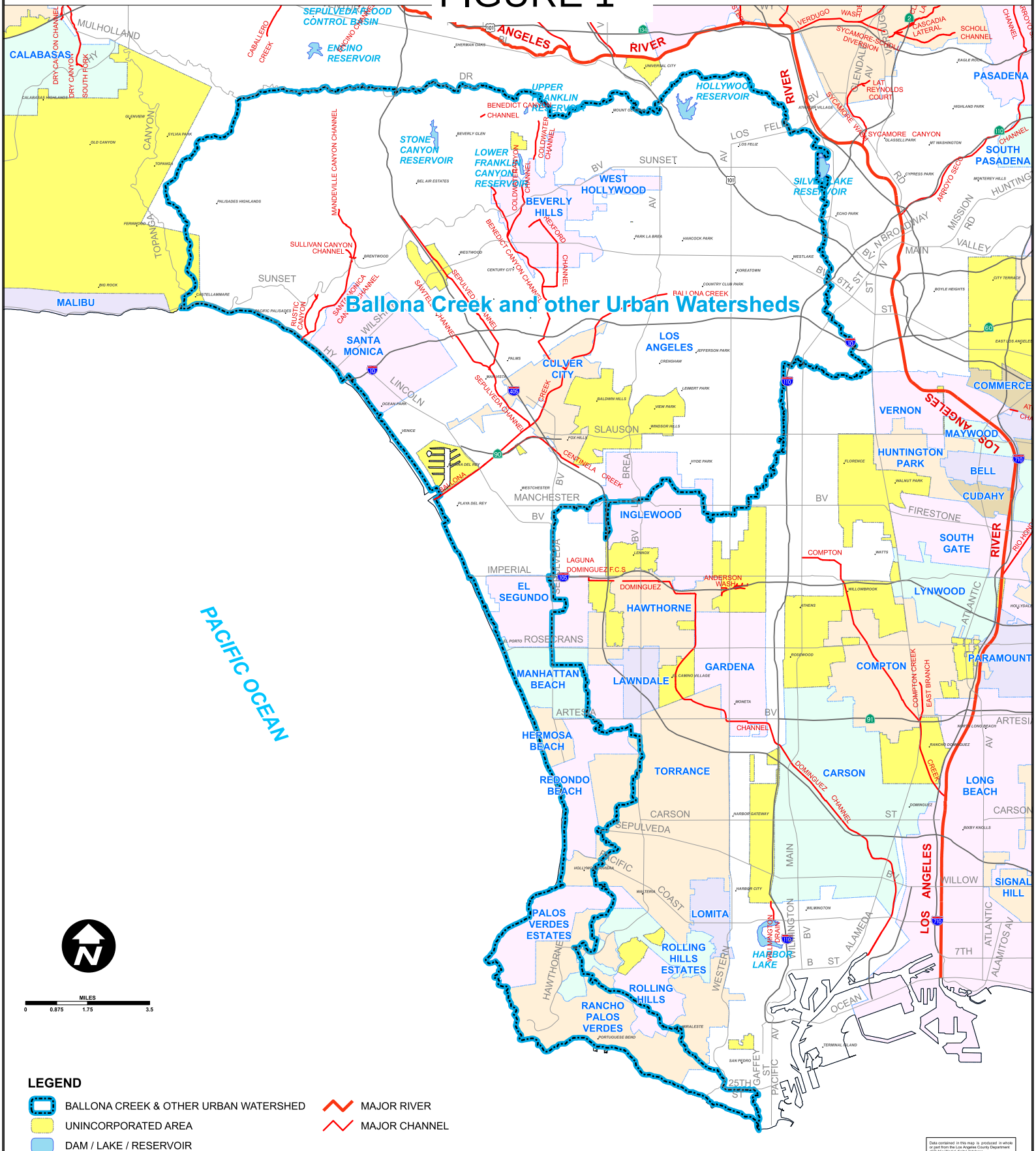
Based on the analysis contained in this report, no significant impacts have been identified for surface water hydrology, surface water quality, groundwater hydrology or groundwater quality for this Project.

APPENDIX

COUNTY OF LOS ANGELES

BALLONA CREEK & OTHER URBAN WATERSHEDS

FIGURE 1



LEGEND

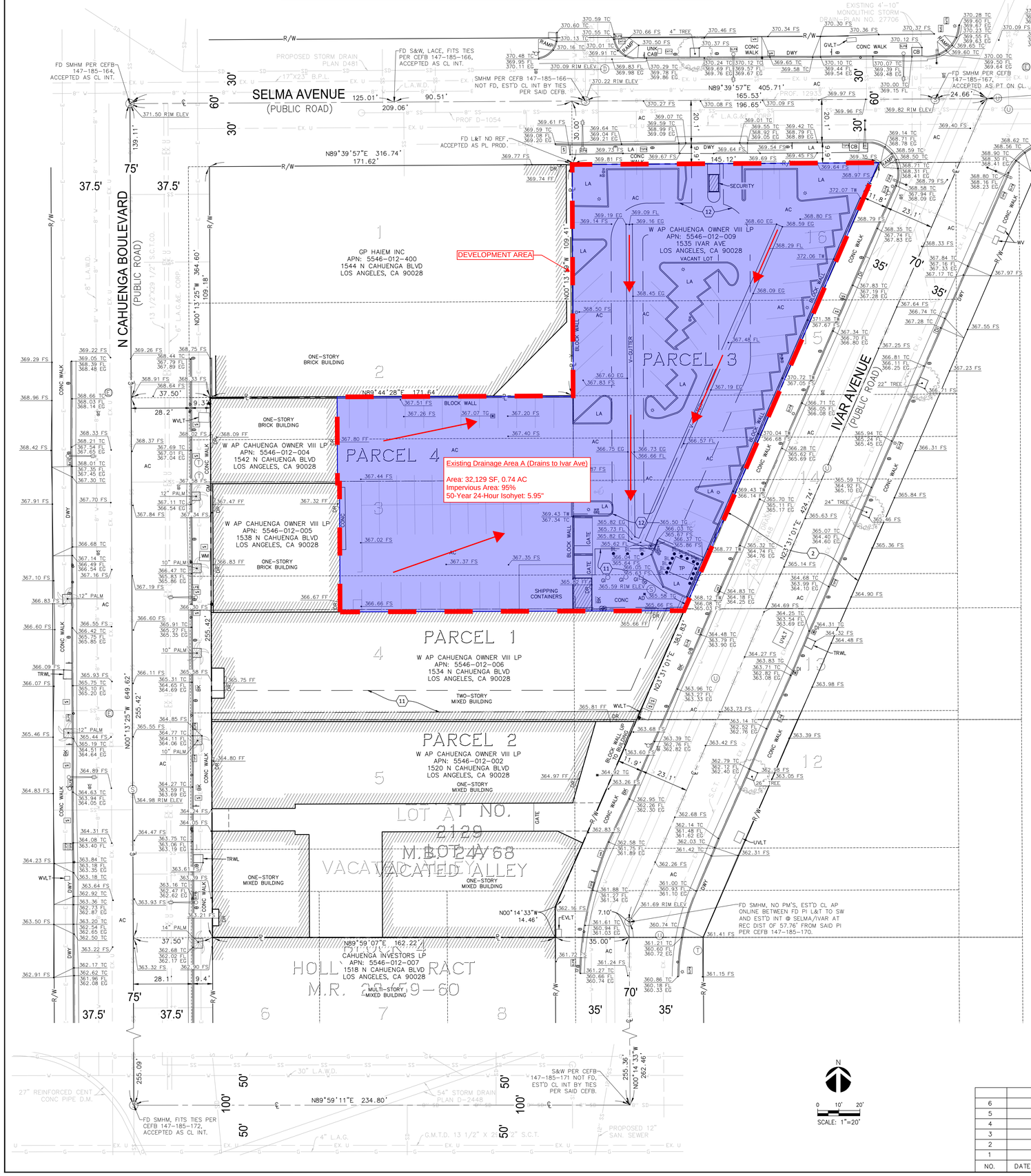
- BALLONA CREEK & OTHER URBAN WATERSHED
- UNINCORPORATED AREA
- DAM / LAKE / RESERVOIR
- MAJOR RIVER
- MAJOR CHANNEL

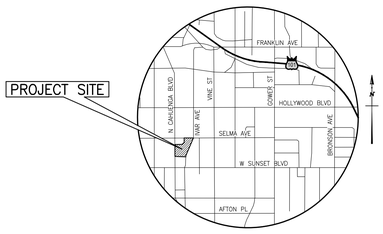
Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.

Mapping & Property Management Division, Mapping & GIS Services Section

Figure 2: Existing Drainage

DESIGN SURVEY





VICINITY MAP
NOT TO SCALE

LEGEND

- AREA DRAIN
- AREA LIGHT
- BOLLARD
- CABLE TV PULLBOX
- CLEANOUT
- CURB DRAIN
- ELECTRIC MANHOLE
- ELECTRIC PULLBOX
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- IRRIGATION CONTROL VALVE
- PARKING METER
- SANITARY SEWER MANHOLE
- SIGN
- STORM DRAIN MANHOLE
- STREET LIGHT
- STREET LIGHT PULLBOX
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL LIGHT
- TRAFFIC SIGNAL PULLBOX
- UNKNOWN MANHOLE
- UNKNOWN PULLBOX
- VENT
- WATER MANHOLE
- WATER METER
- WATER VALVE
- PALM
- TREE

LINETYPES

- BUILDING FOOTPRINT
- BUILDING OVERHANG
- CENTERLINE
- CONCRETE CURB
- DEVELOPABLE PROPERTY LINE
- EASEMENT LINE
- FLOWLINE
- LOT LINE
- PARCEL LINE
- PROPERTY LINE FEE
- TRACT LINE
- WALL

ABBREVIATIONS

AC	ASPHALT CONCRETE
AD	AREA DRAIN
AP	ANGLE POINT
ASPH	ASPHALT
BK	BIKE RACK
BL	BOLLARD
℄	CENTERLINE
CAB	CABINET
CB	CATCH BASIN
CD	CURB DRAIN
CEFB	CITY ENGINEERS FIELD BOOK
CLM	COLUMN
CO	CLEANOUT
CONC	CONCRETE
DI	DRAIN INLET
DIST	DISTANCE
DR	DOOR
DWY	DRIVEWAY
EG	EDGE OF GUTTER
ELEV	ELEVATION
EST'D	ESTABLISHED
EVLT	ELECTRIC VAULT
FD	FOUND
FF	FINISHED FLOOR
FL	FLOWLINE
GB	GRADE BREAK
GI	GREASE INTERCEPTOR
GVLT	GAS VAULT
ICV	IRRIGATION CONTROL VALVE
INT	INTERSECTION
INV	INVERT
LA	LANDSCAPE AREA
LP	LIGHT POLE
LT&T	LEAD TACK AND TAG
NG	NATURAL GROUND
OH	OVERHANG
℗	PROPERTY LINE
PI	POINT OF INTERSECTION
PP	POWERPOLE
R/W	RIGHT-OF-WAY
REC	RECORD
SD	STORM DRAIN
SL	STREET LIGHT
SNF	SEARCHED NOTHING FOUND
SS	SANITARY SEWER
SWK	SIDEWALK
TG	TOP OF GRATE
TP	TRANSFORMER PAD
TRANS	TRANSFORMER
TRWL	TREE WELL
TW	TOP OF WALL
TYP	TYPICAL
UNK	UNKNOWN
UTIL	UTILITY
UVLT	UNKNOWN VAULT
WV	WATER VALVE
WVLT	WATER VAULT
N'LY	NORTHERLY
S'LY	SOUTHERLY
E'LY	EASTERLY
W'LY	WESTERLY
NE'LY	NORTHEASTERLY
NW'LY	NORTHWESTERLY
SE'LY	SOUTHEASTERLY
SW'LY	SOUTHWESTERLY

LEGAL DESCRIPTION

(PER CHICAGO TITLE INSURANCE COMPANY ORDER No. 00092046-997-LT1-JC4 DATED MAY 25, 2018)

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF LOS ANGELES, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

THAT PORTION OF BLOCK 4 OF HOLLYWOOD AND IVAR AVENUE, VACATED, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28 PAGES 59 AND 60 OF MISCELLANEOUS RECORDS OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST QUARTER CORNER OF LOT "A", TRACT NO. 2129, AS PER MAP RECORDED IN BOOK 24 PAGE 68 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER; THENCE EASTERLY ALONG THE NORTH LINE OF SAID LOT "A", 383.21 FEET TO THE NORTHEAST CORNER OF SAID LOT "A", IN THE CENTER LINE OF IVAR AVENUE, VACATED, AS SAID AVENUE IS SHOWN ON SAID MAP OF HOLLYWOOD; THENCE NORTHERLY ALONG SAID CENTER LINE 52.35 FEET TO THE SOUTH LINE OF THE NORTH 16.3 FEET OF LOT 13 IN SAID BLOCK 4; THENCE WESTERLY ALONG SAID SOUTH LINE, 211.61 FEET TO THE EASTERLY LINE OF LOT 4 IN SAID BLOCK 4; THENCE NORTHERLY ALONG SAID EASTERLY LINE 0.30 FEET TO THE SOUTH LINE OF THE NORTHERLY 16 FEET OF SAID LOT 4; THENCE WESTERLY ALONG SAID SOUTHERLY LINE, 171.59 FEET TO THE EASTERLY LINE OF CAHUENGA BOULEVARD, 75 FEET WIDE; THENCE SOUTHERLY ALONG SAID BOULEVARD, 50.53 FEET TO THE POINT OF BEGINNING.

EXCEPT THEREFROM THAT PORTION THEREOF LYING EASTERLY OF THE EASTERLY LINE OF IVAR AVENUE, AS DESCRIBED IN THE FINAL DECREE OF CONDEMNATION ENTERED IN LOS ANGELES COUNTY SUPERIOR COURT, CASE NO. 202550, A CERTIFIED COPY THEREOF BEING RECORDED IN BOOK 9421 PAGE 173 OFFICIAL RECORDS OF SAID COUNTY.

PARCEL 2:

THAT PORTION OF LOT A OF TRACT NO. 2129, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 24 PAGE 68 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, LYING WESTERLY OF THE EASTERLY LINE OF IVAR AVENUE AS DESCRIBED IN THE FINAL DECREE OF CONDEMNATION ENTERED IN LOS ANGELES COUNTY SUPERIOR COURT CASE NO. 202550 A CERTIFIED COPY THEREOF BEING RECORDED IN BOOK 9421 PAGE 173 OFFICIAL RECORDS OF SAID COUNTY.

PARCEL 3:

THOSE PORTIONS OF LOTS 16, 15, 14 AND THE NORTH 16.3 FEET OF LOT 13, ALL IN BLOCK 4 OF HOLLYWOOD, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28, PAGES 59 AND 60 OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, LYING WESTERLY OF THE CENTER LINE OF IVAR STREET, AS CONDEMNED BY THE CITY OF LOS ANGELES, CALIFORNIA.

PARCEL 4:

THE SOUTH 20 FEET OF LOT 2 AND THE NORTH 20 FEET OF LOT 3 IN BLOCK 4 OF HOLLYWOOD, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28 PAGES 59 AND 60 OF MISCELLANEOUS RECORDS. IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THE WEST 10 FEET THEREOF, AS CONVEYED TO THE CITY OF LOS ANGELES FOR STREET PURPOSES.

PARCEL 5:

THE EAST 171.5 FEET OF THE SOUTH 45 FEET OF LOT 3 AND THE EAST 171.5 FEET OF THE NORTH 16 FEET OF LOT 4 OF HOLLYWOOD, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 28 PAGES 59 AND 60 OF MISCELLANEOUS RECORDS. IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

APN: 5546-012-002, 004, 005, 006, 009

EXCEPTIONS

(PER CHICAGO TITLE INSURANCE COMPANY ORDER No. 00092046-997-LT1-JC4 DATED MAY 25, 2018)

(2) EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS CONDEMNED BY AN INSTRUMENT, (PLOTTED HEREON)

ENTITLED: FINAL DECREE
COURT: SUPERIOR COURT
CASE NO.: 202550
PURPOSE: PUBLIC STREET
RECORDING DATE: OCTOBER 18, 1929
RECORDING NO: 1085, IN BOOK 9421 PAGE 173, OF OFFICIAL RECORDS
AFFECTS: ALL PARCELS

(11) MATTERS CONTAINED IN THAT CERTAIN DOCUMENT (PLOTTED HEREON)

ENTITLED: COVENANT AND AGREEMENT
RECORDING DATE: NOVEMBER 14, 2008
RECORDING NO: 2008-2012159, OF OFFICIAL RECORDS
AFFECTS: PARCELS 1 – 3
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
THIS COVENANT AND AGREEMENT PROVIDES THAT IT SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE DVISORY AGENCY APPROVES TERMINATION.

(12) MATTERS CONTAINED IN THAT CERTAIN DOCUMENT (PLOTTED HEREON)

ENTITLED: COVENANT AND AGREEMENT
RECORDING DATE: AUGUST 20, 2012
RECORDING NO: 20121238741, OF OFFICIAL RECORDS
AFFECTS: PARCELS 3 – 5
REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.
THIS COVENANT AND AGREEMENT PROVIDES THAT IT SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

*REMAINING ITEMS ON PRELIMINARY TITLE REPORT NOT SHOWN ABOVE ARE EITHER NOT PLOTTABLE, BLANKET IN NATURE OR NOT A SURVEY MATTER.

COMMENTS

DATES OF SURVEY . . .	SEPTEMBER 11, 14, 20 & 21, 2018
SITE ADDRESS	1520 CAHUENGA BOULEVARD, LOS ANGELES, CA 90028 1534 CAHUENGA BOULEVARD, LOS ANGELES, CA 90028 1538 CAHUENGA BOULEVARD, LOS ANGELES, CA 90028 1542 CAHUENGA BOULEVARD, LOS ANGELES, CA 90028 1535 IVAR AVENUE, LOS ANGELES, CA 90028
APN NO.	5546-012-002, 5546-012-004, 5546-012-005, 5546-012-006 & 5546-012-009
BOUNDARY LINES . . .	WERE ESTABLISHED FROM THE RECOVERED CITY, COUNTY AND/OR PRIVATE ENGINEER MONUMENTS WHOSE CHARACTER AND SOURCE ARE SO NOTED ON THE SURVEY.
BASIS OF BEARINGS . .	THE BEARING OF N00°13'25"W ALONG THE CENTERLINE OF CAHUENGA AVENUE AS SHOWN ON THE MAP OF TRACT NO. 2129, AS RECORDED IN MAP BOOK 24, PAGE 68, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.
BENCH MARK	CITY OF LA BM# 12-19970, SPK N CURB SUNSET BLVD; 3 FT E/O BCR E/O IVAR AVE ELEV. = 357.031 FT; NAVD 1988, RECORDED 2000
(#)	INDICATES PRELIMINARY TITLE REPORT EXCEPTION NUMBER PLOTTED
UTILITIES	ALL VISIBLE ABOVE-GROUND UTILITY FEATURES SHOWN ON THIS MAP WERE OBTAINED BY CONVENTIONAL MEANS. ABOVE-GROUND UTILITIES WERE COMBINED WITH CITY OF LOS ANGELES TO PLOT UNDERGROUND UTILITY LINES SHOWN HEREON. NO REPRESENTATION IS MADE AS TO THE COMPLETENESS OF SAID UTILITY INFORMATION AND ANY USER OF THIS INFORMATION SHOULD CONTACT THE UTILITY OR GOVERNMENT AGENCY DIRECTLY.
FLOOD INSURANCE RATE MAP.	ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PER FLOOD INSURANCE RATE MAP (FIRM) MAP PANEL MAP NO. 06037C1605F EFFECTIVE DATE SEPTEMBER 26, 2008.

PREPARED UNDER THE DIRECTION OF:

PRELIMINARY

CHRISTOPHER JONES, PLS 8193
CHRIS.JONES@KPFF.COM

DATE

LICENSED LAND SURVEYOR CHRISTOPHER H. JONES No.8193 STATE OF CALIFORNIA

NO.	DATE	REVISIONS
6		
5		
4		
3		
2		
1		

PROJECT #	1800494
DATE PREPARED	10/19/2018
DRAWN BY	DB
CHECKED BY	CJ

ARTISAN HOLLYWOOD

PREPARED FOR:
MR. MARK LADERMAN
MANAGING PARTNER
ARTISAN REALTY ADVISORS
3000 OLYMPIC BOULEVARD, SUITE 1255
SANTA MONICA, CA 90404

kpff
700 FLOWER ST., Suite 2100
Los Angeles, CA 90017
O: 213.418.0201
F: 213.266.5294
www.kpff.com

Figure 3: Coastal Plain of Los Angeles Groundwater Basin

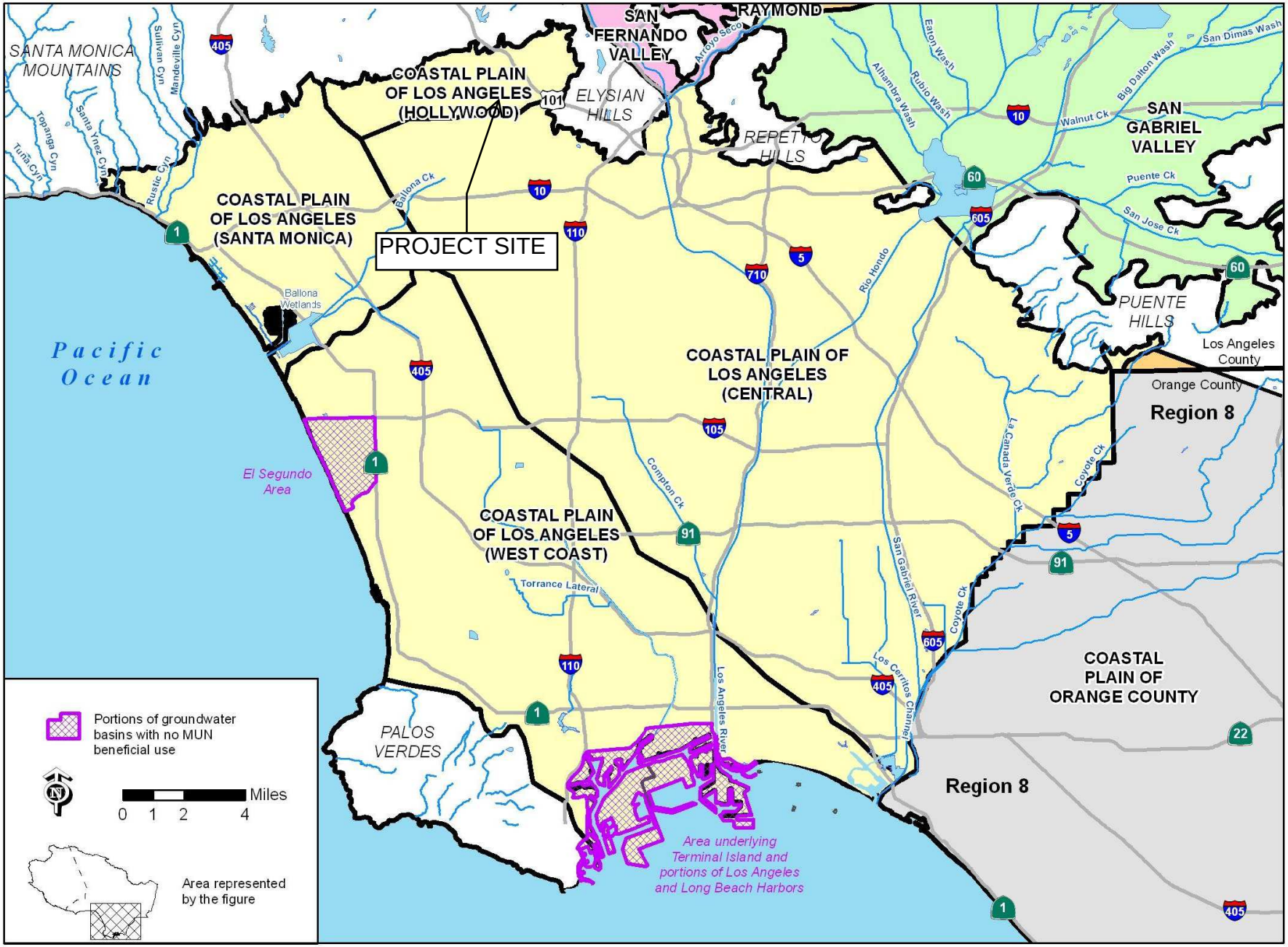


Figure 4: HydroCalc

Peak Flow Hydrologic Analysis

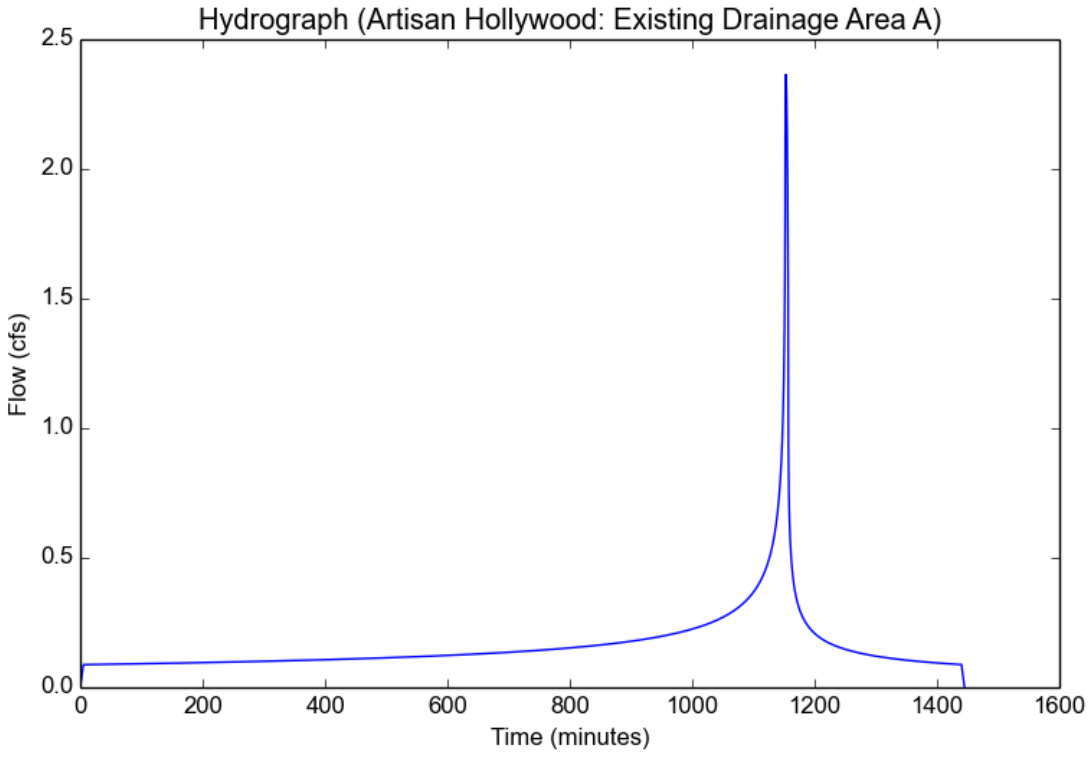
File location: P:/2019/1900421 Space 1520/2 ENGR/EIR/Water Resources/Figure 4 - HydroCalc.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Artisan Hollywood
Subarea ID	Existing Drainage Area A
Area (ac)	0.74
Flow Path Length (ft)	220.0
Flow Path Slope (vft/hft)	0.022
50-yr Rainfall Depth (in)	5.95
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.95
Peak Intensity (in/hr)	3.5499
Undeveloped Runoff Coefficient (Cu)	0.8593
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	2.3643
Burned Peak Flow Rate (cfs)	2.3643
24-Hr Clear Runoff Volume (ac-ft)	0.3275
24-Hr Clear Runoff Volume (cu-ft)	14265.7245



Peak Flow Hydrologic Analysis

File location: P:/2019/1900421 Space 1520/2 ENGR/EIR/Water Resources/X.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	Artisan Hollywood
Subarea ID	Proposed Drainage Area A
Area (ac)	0.74
Flow Path Length (ft)	300.0
Flow Path Slope (vft/hft)	0.01
50-yr Rainfall Depth (in)	5.95
Percent Impervious	0.87
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.95
Peak Intensity (in/hr)	3.5499
Undeveloped Runoff Coefficient (Cu)	0.8593
Developed Runoff Coefficient (Cd)	0.8947
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	2.3504
Burned Peak Flow Rate (cfs)	2.3504
24-Hr Clear Runoff Volume (ac-ft)	0.2951
24-Hr Clear Runoff Volume (cu-ft)	12855.2827

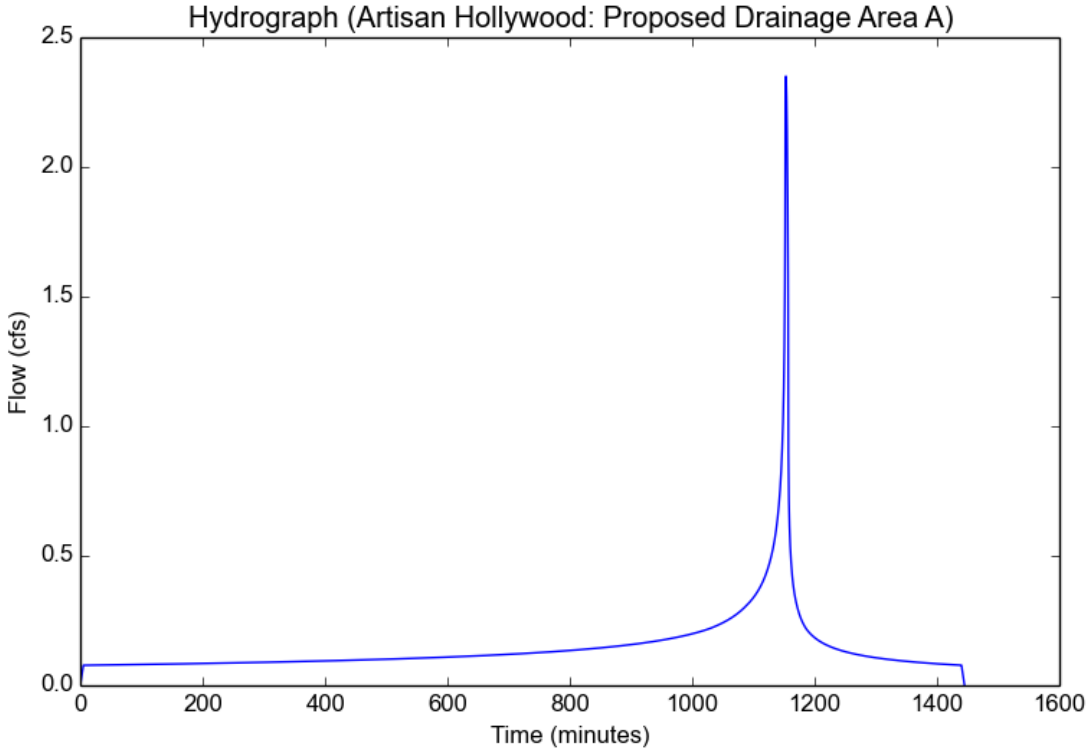
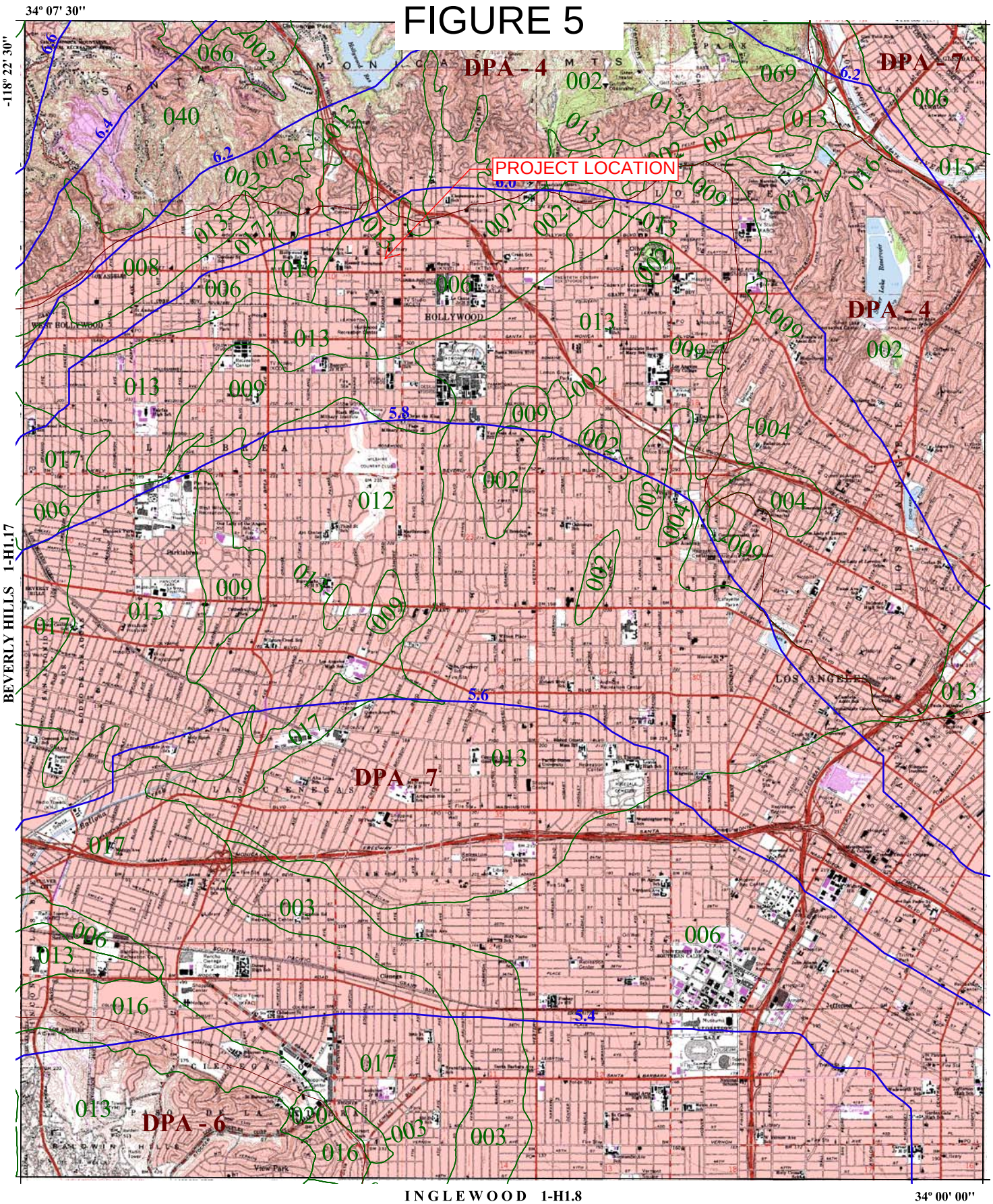


FIGURE 5



25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

HOLLYWOOD
50-YEAR 24-HOUR ISOHYET

1-H1.18

LOS ANGELES COUNTY PUBLIC WORKS
Public Service That Works

FIGURE 6

LID Design Rainfall Depth:

Project Site 85th Percentile 24-hr Rainfall: 0.99 in.

(Check at:) http://ladpw.org/wrd/hydrologygis/

Design Rainfall Depth: **0.99** in.

(85th Percentile Rainfall or 3/4", whichever is greater)

Areas draining to BMP

Red values to be changed by user.

Black values are automatically calculated.

Drainage Area	Total Area	Impervious Area	% IMP
	sqft	*sqft*	*%*
DA-1	32129	27519	86%
DA-2			
DA-3			
DA-4			
DA-5			
DA-6			
DA-7			
DA-8			
DA-9			
DA-10			
TOTAL	*32129*	*27519*	

Capture & Use Sizing

Note:	Red values to be changed by user.
	Black values are automatically calculated.

[1]	Total Area (SF)		32129
[2]	Impervious Area (SF)		27519
[3]	Pervious Area (SF)	**[1]-[2] =**	4610
[4]	Catchment Area (SF)	**([2]*0.9)+([3]*0.1) =**	25228
[5]	Design Rainfall Depth (in)	**Greater of 0.75", 85th percentile**	0.99
[6]	V_{design} (gal)	**[5]/12*7.48*[4] =**	**15568**
[7]	Planting Area (SF)		2315
[8]	Plant Factor*		0.5
[9]	$ETWU_{(7\text{-month})}$	**21.7*0.62*[8]*[7] =**	15573
[10]	Is $V_{design} \leq ETWU_{(7\text{-month})}$?		**YES**

*The plant factor used shall be from WUCOLS. The plant factor ranges from 0 to 0.3 for low water use plants, from 0.4 to 0.6 for moderate water use plants, and from 0.7 to 1.0 for high water use plants.

Source: LID Handbook, City of LA (May 2012)

Planter Box Sizing

Note:

Red values to be changed by user.
Black values are automatically calculated.

[1]	Total Area (SF)		32129
[2]	Impervious Area (SF)		27519
[3]	Pervious Area (SF)	**[1]-[2] =**	4610
[4]	Catchment Area (SF)	**([2]*0.9)+([3]*0.1) =**	25228
[5]	Design Rainfall Depth (in)	**Greater of 0.75", 85th percentile**	1.0
[6]	V_{design} (CF)	**1.5*[5]/12*[4] =**	3122
[7]	$K_{sat,media}$ (in/hr)		5.0
[8]	FS	**Use 6 if no geotech investigation**	2.0
[9]	$K_{sat,design}$ (in/hr)	**[7]/[8] =**	2.5
[10]	d_{p_max}, Max. Ponding Depth (ft)	**MIN(1, [9]*48/12) =**	1.0
[11]	d_p, Ponding Depth (ft)	**1' max.**	1.0
[12]	T_{fill} (hr)		3
[13]	**A_{min} (sq. ft)**	**[6]/([9]*[12]/12 + [11])**	**1921**

Source: LID Handbook, City of LA (May 2012)

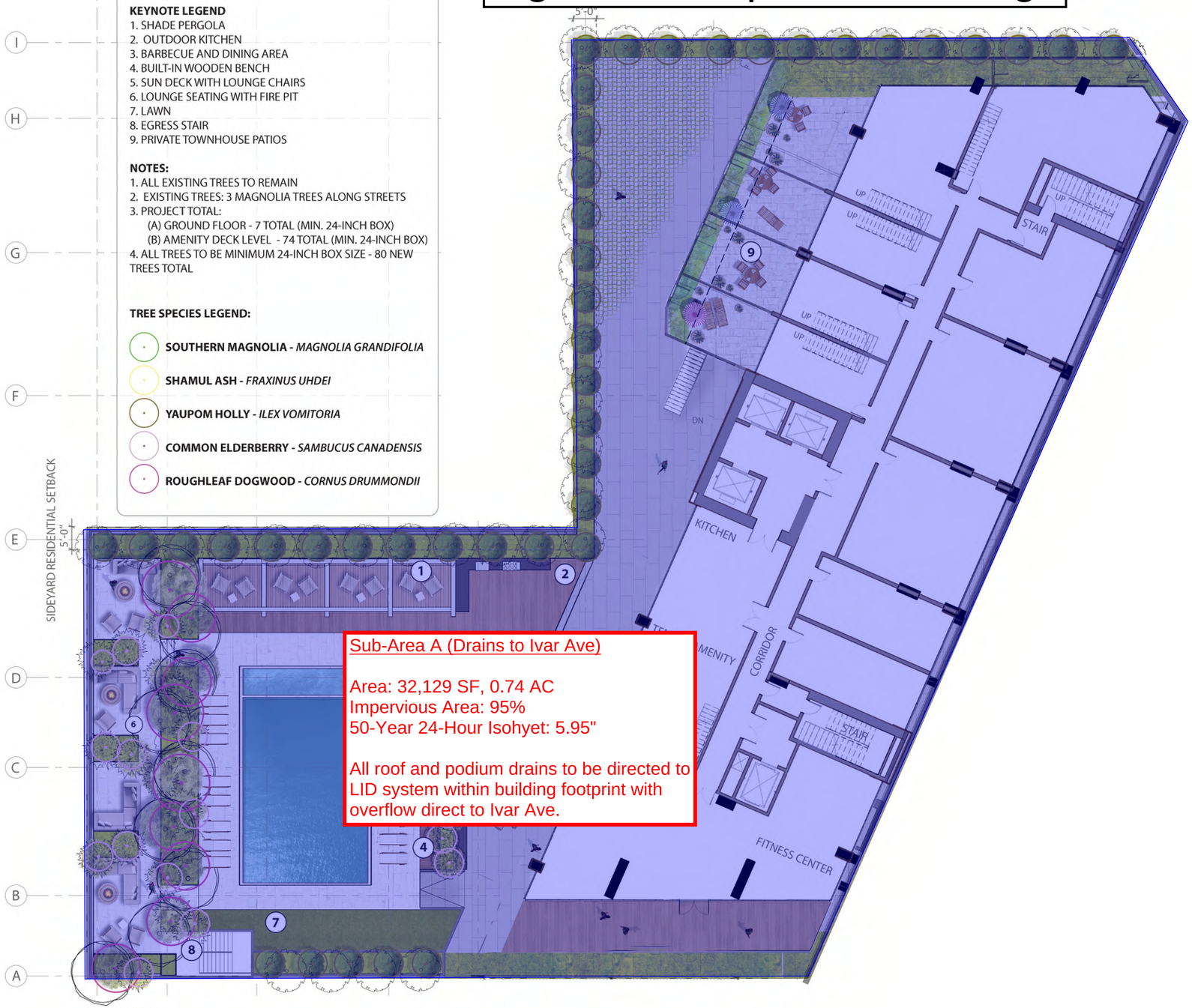
Figure 7: Proposed Drainage

KEYNOTE LEGEND
1. SHADE PERGOLA
2. OUTDOOR KITCHEN
3. BARBECUE AND DINING AREA
4. BUILT-IN WOODEN BENCH
5. SUN DECK WITH LOUNGE CHAIRS
6. LOUNGE SEATING WITH FIRE PIT
7. LAWN
8. EGRESS STAIR
9. PRIVATE TOWNHOUSE PATIOS

NOTES:
1. ALL EXISTING TREES TO REMAIN
2. EXISTING TREES: 3 MAGNOLIA TREES ALONG STREETS
3. PROJECT TOTAL:
   (A) GROUND FLOOR - 7 TOTAL (MIN. 24-INCH BOX)
   (B) AMENITY DECK LEVEL - 74 TOTAL (MIN. 24-INCH BOX)
4. ALL TREES TO BE MINIMUM 24-INCH BOX SIZE - 80 NEW TREES TOTAL

TREE SPECIES LEGEND:

- **SOUTHERN MAGNOLIA** - *MAGNOLIA GRANDIFOLIA*
- **SHAMUL ASH** - *FRAXINUS UHDEI*
- **YAUPOM HOLLY** - *ILEX VOMITORIA*
- **COMMON ELDERBERRY** - *SAMBUCUS CANADENSIS*
- **ROUGHLEAF DOGWOOD** - *CORNUS DRUMMONDII*



TREE SPECIES

SOUTHERN MAGNOLIA
MAGNOLIA GRANDIFOLIA
PROJECT TOTAL: 6

SHAMEL ASH
FRAXINUS UHDEI
PROJECT TOTAL: 1

YAUPOM HOLLY
ILEX VOMITORIA
PROJECT TOTAL: 47

COMMON ELDERBERRY
SMBUCUS CANADENSIS
PROJECT TOTAL: 18

ROUGHLEAF DOGWOOD
CORNUS DRUMMONDII
PROJECT TOTAL: 9

PROJECT TOTAL: 68

0 3 6 12 24

ARTISAN HOLLYWOOD
1520-1542.5 Cahuenga Blvd.,
6350 Selma Ave., and 1523-1549 Ivar Ave.
Los Angeles, CA 90068

AP CAHUENGA OWNER VIII, L.P.
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△ Date Description

Seal / Signature

NOT FOR CONSTRUCTION

Project Name
ARTISAN HOLLYWOOD

Project Number
05.1593.000

Description
01 LANDSCAPE PLAN
4th FLOOR AMENITY DECK

Scale
1/8" = 1'-0"

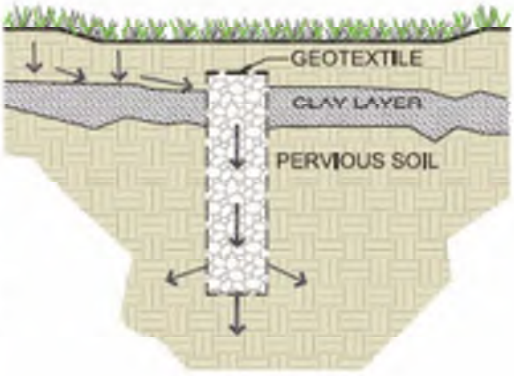
L1.10

EXHIBIT 1

TYPICAL LID BMPs

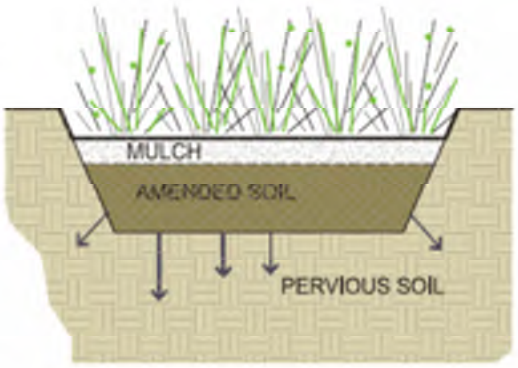
Dry Wells

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



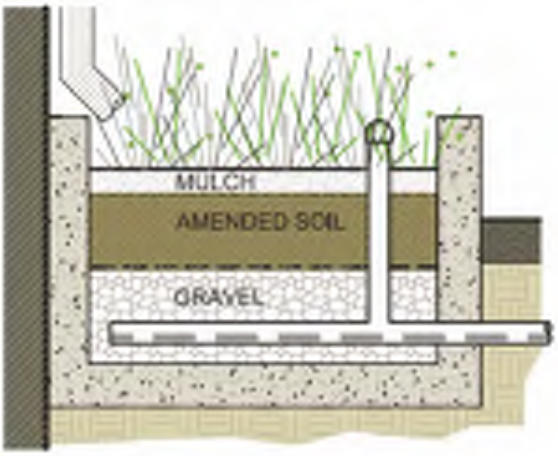
Bioretention

Bioretention stormwater treatment facilities are landscaped shallow depressions that capture and filter stormwater runoff. These facilities function as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. The facilities normally consist of a ponding area, mulch layer, planting soils, plantings, and, optionally, a subsurface gravel reservoir layer.



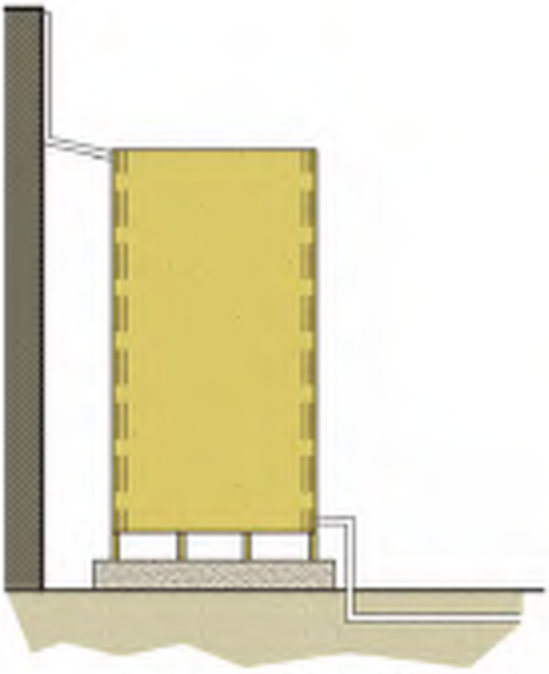
Planter Boxes

Planter boxes are bioretention treatment control measures that are completely contained within an impermeable structure with an underdrain (they do not infiltrate). They are similar to bioretention facilities with underdrains except they are situated at or above ground and are bound by impermeable walls. Planter boxes may be placed adjacent to or near buildings, other structures, or sidewalks.



4.5 CAPTURE AND USE BMPS

Capture and Use refers to a specific type of BMP that operates by capturing stormwater runoff and holding it for efficient use at a later time. On a commercial or industrial scale, capture and use BMPs are typically synonomous with cisterns, which can be implemented both above and below ground. Cisterns are sized to store a specified volume of water with no surface discharge until this volume is exceeded. The primary use of captured runoff is for subsurface drip irrigation purposes. The temporary storage of roof runoff reduces the runoff volume from a property and may reduce the peak runoff velocity for small, frequently occurring storms. In addition, by reducing the amount of stormwater runoff that flows overland into a stormwater conveyance system, less pollutants are transported through the conveyance system into local streams and the ocean. The onsite use of the harvested water for non-potable domestic purposes conserves City-supplied potable water and, where directed to unpaved surfaces, can recharge groundwater in local aquifers.



Cistern Example