Appendix G Hydrology and Water Quality



Hydrology and Water Quality Technical Memorandum

## Burbank Dual Brand Hotel

2500 North Hollywood Way Burbank, CA

## Prepared For

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## TABLE OF CONTENTS

<u>Se</u>	<u>ction</u>		<u>Pa</u>	ige
1.	INT	ROD	UCTION	. 1
	1.1.	Proj	ect Overview	. 1
	1.2.	Sco	pe of Work And Purpose Of Report	. 2
2.	PRC	DJEC	T DESCRIPTION AND SETTING	. 3
	2.1.	Loco	al Drainage and Hydrology	. 3
	2.1.	1.	Onsite Drainage	. 3
	2.1.	2.	Local Storm Drain Infrastructure	. 3
	2.1.	3.	FEMA	. 5
	2.2.	Wat	er Quality	. 5
	2.2.	1.	Onsite Groundwater Conditions	. 5
	2.2.	2.	Permanent Water Quality Features	. 6
	2.2.	3.	Construction Impacts and Best Management Practices	. 7
	2.3.	Regi	ional Environmental Setting	. 8
	2.3.	1.	Receiving Waters	. 8
	2.3.	2.	Water Quality Objectives and Impaired Water Bodies	. 9
	2.3.	3.	Regional Groundwater Supplies and Quality	10
3.	SIG	NIFIC	CANCE THRESHOLDS	11
4.	PRC	DJEC	T IMPACT ANALYSIS	12
5.	LEVI	el OI	F SIGNIFICANCE	14

## LIST OF TABLES

# TablePageTable 1 – Existing Hydrology Conditions3Table 2 – Proposed Proposed Hydrology Conditions4Table 3 – Existing vs Proposed Hydrology Conditions4Table 4 – Existing Capacity vs Proposed Peak Flows5Table 5 – Potential Pollutants6Table 6 – Low Impact Development Calculations (85<sup>th</sup> Percentile)7

## LIST OF ATTACHMENTS

ATTACHMENT A – Regulatory Framework

ATTACHMENT B – Local Storm Drain System Exhibit

ATTACHMENT C – Existing On-site Hydrology map

ATTACHMENT D – HydroCalc Hydrology Results for Existing Site

ATTACHMENT E – FEMA Floodplain Map

ATTACHMENT F - 2014-16 303(d) List

ATTACHMENT G – Proposed On-site Hydrology Map

ATTACHMENT H – HydroCalc Hydrology Results for Proposed Site

ATTACHMENT I – LA County GIS 85<sup>th</sup> Percentile Map

ATTACHMENT J – LID Calculations

ATTACHMENT K – Geotechnical Report

ATTACHMENT L – Los Angeles River Watershed Map

ATTACHMENT M – Proposed Hydrology Exhibit

ATTACHMENT N – ALTA by TAIT

ATTACHMENT O – Existing Storm Drain Capacity Calculations

ATTACHMENT P – Operations and Maintenance, and City of Burbank Covenant

## 1. INTRODUCTION

## 1.1. PROJECT OVERVIEW

The Burbank Dual Brand Hotel project (Project) is a proposed commercial mixed-use development project on a 6.14-acre site (Project Site) located on 2500 North Hollywood Way in Burbank, California, north of the City of Los Angeles. The Project Site is bounded by Thornton Ave to the north, and commercial buildings and parking lots to the west, south and east.



The Project Site is a portion of a larger property with APN: 6464-04-015. The property is currently owned by Trifecta Hotel B Owner, LLC<sup>1</sup>. Under existing conditions, the Project Site is a parking lot serving an adjacent convention center and hotel.

Under proposed conditions, the Project will consist of a 7-story dual-brand hotel with associated retail and restaurants. The hotel will be located on the western portion of the project site and consist of approximately 420 guest rooms. Parking for the hotel and retail center will be provided

<sup>&</sup>lt;sup>1</sup> Per Los Angeles Assessor's Office. Information accessed February 2020.

through a 4-story parking garage on the eastern portion of the site and a proposed surfacelevel parking lot.

## 1.2. SCOPE OF WORK AND PURPOSE OF REPORT

As part of the environmental impact report (EIR) for the Project, this report describes the existing and proposed surface water hydrology, surface water quality, and groundwater at the Project Site and immediate surrounding areas, as well analyzes the Project's potential impacts on each of these water resources.

## 2. PROJECT DESCRIPTION AND SETTING

## 2.1. LOCAL DRAINAGE AND HYDROLOGY

## 2.1.1. Onsite Drainage

The existing Project Site is a parking lot that serves adjacent commercial buildings. The majority of on-site runoff sheet flows across the project site towards the southeast. Surface flows are captured by a series of 5 grate or curb inlet catch basins located throughout the lot. The onsite private storm drain infrastructure was mapped using an ALTA/ACSM Land Title Survey by TAIT, dated December 2014, associated CAD files, and in-person site walks (See Attachment N). Attachment C calls out the onsite private storm drain infrastructure that runs north-south directly to the west of the property. Refer to Attachment C for the existing drainage pattern of both surface flow and interior pipe flow, and existing hydrology of the Project Site. No groundwater was encountered to depths of 80 feet below the surface.

## 2.1.2. Local Storm Drain Infrastructure

After on-site flows drain through private storm drain infrastructure, they connect to the Lockheed storm drain, a 60-inch reinforced concrete pipe (RCP) maintained by the City of Burbank. The Lockheed storm drain runs south before draining to the Lockheed storm drain channel. The Lockheed storm drain channel is a 12-foot channel maintained by the City of Burbank that outlets to the Burbank Western Flood Control Channel.

All runoff from the Project Site is ultimately discharged into the Los Angeles River (Reach 4) and ultimately into the Pacific Ocean. Reach 4, which represents the Glendale Narrows, is approximately 10-miles long and spans the area that encompasses portions of the cities of Glendale, Burbank, and Los Angeles.

## Existing Hydrology Conditions

In accordance with the Urban Flood and storm drain design requirements set forth in the Los Angeles County Department of Public Works Hydrology Manual, the 10-year and 25-year storms were analyzed for existing and proposed conditions. Table 1 below provides the 10-year and 25-year storm frequency analysis for the Project Site's existing conditions. The existing imperviousness was obtained from Appendix D (Proportion Impervious Data) of the Los Angeles County Public Works Hydrology Manual (2006). The Hydrology Manual calls for an imperviousness of 91% for all parking lot land uses and was used to determine peak flows. Output calculations are provided in Attachment D.

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	Drainage Area	Area (acres)	% Imperviousness	Q10 (cfs)	Q25 (cfs)	
	А	2.52	91	5.5	7.3	
	B1	2.45	91	5.4	7.1	
	B2	1.20	91	3.1	3.8	
	Existing Total	6.17	91 (average)	14.0	18.2	

#### Table 1 Existing Hydrology Conditions

## Proposed Hydrology Conditions

Under the proposed buildout scenario of a 7-story hotel and associated 4-story parking garage and surface parking, drainage patterns will slightly deviate from existing conditions.

Previously there were two outfalls from the project site to the 60-inch Lockheed storm drain. In the proposed there is only one outfall to the pipe as all the site drainage is routed to a LID BMP that overflows to this outfall.

Development of the Project will result in an increase in pervious areas throughout the Project Site and would decrease the impervious surfaces from 91 percent to 85 percent, while simultaneously increasing the flow path length of incoming sheet flow. The pervious percentage (opposite of impervious) was found by taking the planter/landscaping area (shown in Attachment G in the Proposed Condition Storm Events Table) and dividing the by the total square footage. These factors will result in reduced peak flows. Table 2 below provides an analysis of the 10-year and 25-year frequency design storm events following construction of the Project. Attachment G provides the Proposed Hydrology Map and output calculations are provided in Attachment H.

#### Table 2 Proposed Hydrology Conditions

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Drainage /	Area Ar	ea (acres)	% Imperviousness	Q10 (cfs)	Q25 (cfs)
A		6.17	85	9.5	12.9

Table 3 provides a comparison of the existing and proposed peak flows for the 10-year and 25-year storm events. These values provide the basis for the peak flow values and pipe sizing design. See Attachment M for the Proposed Hydrology Exhibit.

#### Table 3 Existing Vs Proposed Hydrology Conditions

Condition	Area (acres)	Q10 (cfs)	Q25 (cfs)
Existing	6.17	14.0	18.2
Proposed	6.17	9.5	12.9
Difference		-4.5	-5.3
% Increase or Decrease from Existing to Proposed Conditions		-32%	-29%

The above analysis includes the assumption that with the new building footprints, there would be an increase in flow path length due to the increased path of travel of stormwater around the proposed buildings. As shown in Table 3, under proposed conditions peak flows are reduced across all design storm events for the Project.

All the existing catch basins to remain will have new proposed connections to the site storm drain infrastructure. The segments of pipe connecting to the 60-inch Lockheed storm drain will also be protected in place to the point of the overflow connection for the LID BMP.

## 2.1.2.1. Storm Drain Capacity

Based on the above analysis, operation of the Project would not result in increased site runoff, or create negative impacts to the capacity of the existing downstream storm drain system. Flows are anticipated to decrease due to due to longer flow paths and increased pervious surfaces throughout the Project Site. In addition, the Project would not substantially reduce or increase the amount of surface water in the local water body or result in a permanent adverse change in the drainage pattern that would result in an incremental effect on the capacity of the existing storm drain system.

Following is a table of the existing onsite and offsite pipe capacities and how they compare to the 25-year proposed peak flow that each pipe will be accommodating, respectively. Attachment O gives the calculations of each pipe by size. Pipe slope for the 60" Lockheed Storm Drain was acquired per the storm drain As-Built in Attachment B. Pipe slope for the private storm drain infrastructure uses a conservative value of 0.5% for each pipe. Additional flow into the 30-inch private storm drain was conservatively estimated to be 3.1-cfs for a 25-year storm, 50-foot flow path, and a slope of 2%, this is also included in Attachment O.

Table 4 Existing Capacity vs. Proposed Peak Flows

Drainage Area(s)	Pipe Size	Max Pipe Capacity	Cumulative	% of Pipe
	(inches)	(cfs)	Q25 (cfs)	Capacity Used
All	30 (South)	29	15.9	55%

As shown in the table above, the capacity in the southern infrastructure would be able to handle the whole site (30-inch pipe capacity of 29 cfs > Cumulative Q25 of 15.9 cfs). The overflow path will remain the same as the existing site conditions.

## 2.1.3. FEMA

According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) No. 06037C1328F, dated September 26, 2008, the Project Site is located within Zone X, which depicts areas determined to be outside the 0.2-percent (500-year) annual chance floodplain. Therefore, the processing of a letter of map revision or conditional letter of map revision (LOMR/CLOMR) through FEMA will not be required for the project. The Project will not locate any structures in a floodplain or area otherwise subject to mudflow or tsunami. See Attachment E for the floodplain map.

## 2.2. WATER QUALITY

Stormwater runoff from the Project has the potential to discharge pollutants into the City and County storm drain system. The sections below describe Low Impact Development (LID) design features that will be included in the Project to ensure local and regional water quality is protected.

## 2.2.1. Onsite Groundwater Conditions

To determine the most appropriate LID features to incorporate into the Project's design, a sitespecific geotechnical investigation was performed by Geotechnologies, Inc. on February 21, 2020 to determine the feasibility of implementing infiltration Best Management Practices (BMPs). The investigation included a review of prior exploratory soil borings and site investigations to determine composition of soil and presence of groundwater. See Attachment K.

No groundwater was encountered on the Project Site to depths of 80 feet below ground surface (bgs) per the report. In addition, the makeup of on-site soils was found to be favorable to infiltration. Therefore, infiltration is anticipated to be feasible for the proposed Project pending site specific percolation tests which will be conducted during final design phases of the Project. The State Water Resource Control Board's (SWRCB) Geotracker website indicates there are no significant sources of soil or groundwater pollution within the Project area. For addition details on the proposed LID BMP systems, see Section 2.2.2 below.

Under the proposed conditions, regional and local groundwater levels and adjacent wells or well fields will not be impacted by the Project. The Project does not include any groundwater pumping and relies on Burbank Water and Power for potable water supplies. Implementation of the Project would also result in an increase in pervious areas over the existing conditions. The increase in pervious areas would improve the groundwater recharge capacity of the Project Site over existing conditions.

## 2.2.2. Permanent Water Quality Features

Anticipated pollutants and typical source of the pollutants are summarized in Table below.

Potential Pollutants	Source of Pollutants	
Sediment	Pedestrian, vehicle tracking, and discharge from landscaped areas	
Oils	Spills from restaurants and leakage from vehicles or other mechanical machines	
Nutrients	Landscaped areas and lawns (fertilizer)	
Pesticides	Landscaped areas and lawns	
Trash/Debris	Parking lots and pedestrian areas	
Chemicals	Leakage from vehicles, accidental maintenance spills	

Table 5 Potential Pollutants

To meet the local MS4 Permit and LID requirements consistent with the City's Municipal Storm Water and Urban Runoff Discharges & and Low Impact Development Standards Manual ("LID Manual") (2015), stormwater management strategies will be implemented throughout the Project Site. As mentioned above, it is anticipated that infiltration will be feasible at the Project Site due to favorable soils, deep groundwater and no prior contamination. This will be finalized once percolation testing is conducted during final design phases of the project.

Table 6 shows the storm water quality design volumes (SWQDv, a volume of water representative of an 85<sup>th</sup> percentile storm event for the project site), as well as water quality flow rates ( $Q_{pm}$ , a flow rate representing the max flow of an 85<sup>th</sup> percentile storm event for the project site), that are required to be detained and treated for each drainage area based on an 85<sup>th</sup> percentile storm event of 1.1". Please refer to Attachment I for LA County 85<sup>th</sup> Percentile exhibit and Attachment J for the HydroCalc LID Results for the Proposed Site. The proposed project

site currently accounts for a single LID BMP device that all flow is routed to, therefore the site is calculated as a single sub-area.

Table 6 Low Im	pact Develo	pment Calculations	(85th Percentile	)

Drainage Area	Area (acres)	Qpm (cfs)	SWQDv (cf)
А	6.17	1.2	20,445.29

Infiltration is feasible and a subsurface infiltration BMP (e.g. drywell or infiltration gallery) is included in the final design. The proposed location can be seen in Attachment M. The Operations and Maintenance as well as the City of Burbank SUSMP Covenant can be seen in Attachment P. The proposed LID BMP will effectively treat the pollutants of concern for the Project Site and are projected to improve water quality over existing conditions.

## 2.2.3. Construction Impacts and Best Management Practices

Implementation of the Project would result in construction activities that includes demolition of the existing parking lot and landscaping areas on-site and excavation of existing soils. It is anticipated that the Project would result in excavating soil in order to construct a proposed garage building. With further analysis on the amount of export material accumulated based off the cut/fill of the Project Site, the material will be hauled to a nearby permitted landfill.

Construction activities have the potential to temporarily alter the existing drainage patterns of the Project Site and also increase the permeability of the site based on the increase pervious surface coverage during construction. Exposed pervious surfaces also have the potential for erosion, scour, and increased sediment and associated pollutants discharging from the Project Site during construction activities. The main pollutant of concern during construction is typically sediment and soil particles that discharge off-site due to wind, rain, and construction patterns. In the event exceedances of receiving water quality objectives are observed, measures must be taken and documented within the Storm Water Pollution Prevention Plan (SWPPP) to improve discharge water quality and runoff effluent. This may include but not be limited to increasing the size of existing BMPs, adding more BMPs to the drainage area, additional filtering, and/or a reduction in active grading areas.

## Construction Best Management Practices (BMPs)

Prior to commencement of construction activities, the Construction General Permit requires the Project to prepare a SWPPP in accordance with the site-specific information including grading limits, BMPs for each phase, schedule, and sediment risk analyses. In accordance with the Construction General Permit, the SWPPP must be made available for review upon request, shall describe construction BMPs that address pollutant source reduction, and provide measures/controls necessary to mitigate potential pollutant sources. These measures/controls include, but are not limited to: erosion controls, sediment controls, tracking controls, non-storm water management, materials and waste management, and good housekeeping practices including the following:

• Erosion control BMPs, such as hydraulic mulch, soil binders, and geotextiles and mats, protect the soil surface by covering and/or binding the soil particles. Temporary earth dikes or drainage swales may also be employed to divert runoff away from exposed areas and into more suitable locations. If implemented correctly, erosion controls can

effectively reduce the sediment loads entrained in storm water runoff from construction sites.

- Sediment controls are designed to intercept and filter out soil particles that have been detached and transported by the force of water. Storm drain inlets on the Project Site or within the project vicinity (i.e., along streets immediately adjacent to the project boundary) should be adequately protected with an impoundment (i.e., gravel bags) around the inlet and equipped with a sediment filter (i.e., fiber roll). Bags should also be placed around areas of soil disturbing activities, such as grading or clearing.
- Stabilize construction entrance/exit points to reduce the tracking of sediments onto adjacent streets. Wind erosion controls should be employed in conjunction with tracking controls.
- Non-storm water management BMPs prohibit the discharge of materials other than storm water, as well as reduce the potential for pollutants from discharging at their source. Examples include avoiding paving and grinding operations during the rainy season (i.e., October 1 through April 30 each year) where feasible, and performing any vehicle equipment cleaning, fueling and maintenance in designated areas that are adequately protected and contained.
- Waste management consists of implementing procedural and structural BMPs for collecting, handling, storing and disposing of wastes generated by a construction project to prevent the release of waste materials into storm water discharges.

The phases of construction will define the maximum amount of soil disturbed, the appropriately sized sediment basins, and other control measures to accommodate all active soil disturbance areas and the appropriate monitoring and sampling plans.

Through compliance with the Construction General Permit including the preparation of a SWPPP, implementation of BMPs appropriate for each major phase of construction, and compliance with applicable City grading regulations, construction of the Project would not cause flooding, substantially increase or decrease the amount of surface water in a water body, or result in a permanent, adverse change to flow direction. The construction of the Project would also not result in discharges that would cause: (1) pollution that would impact the quality of waters of the State to a degree which negatively impacts 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. Lastly, construction of the Project would not result in discharges that would cause regulatory impacts within the Los Angeles River.

## 2.3. REGIONAL ENVIRONMENTAL SETTING

## 2.3.1. Receiving Waters

The Project Site is located within the Los Angeles River Watershed, which covers over 830 square miles. The watershed includes the western portion of the San Gabriel Mountains, the Santa Susana Mountains, the Verdugo Hills, and the northern slope of the Santa Monica Mountains. The Los Angeles River flows from the wester San Fernando Valley, crosses the San Fernando

Valley and the central portion of the Los Angeles Basin, and outlets in San Pedro Bay near Long Beach. The watersheds terrain consists of mountains, foothills, valleys, and the coastal plain. The major tributaries or sub-watersheds of the Los Angeles River include the Burbank Western Channel, Pacoima Wash, Tujunga Wash, and Verdugo Wash in the San Fernando Valley; and the Arroyo Seco, Rio Hondo, and Compton Creek in the Los Angeles Basin. The project falls within the Burbank Western Channel sub-watershed.

## 2.3.2. Water Quality Objectives and Impaired Water Bodies

As described above, the Project is tributary to the Burbank Western Channel sub-watershed that in turn drains to Los Angeles River Reach 4 and Reach 3. Based on the Board Basin Plan for Coastal Watersheds of Los Angeles and Ventura Counties, the proposed beneficial uses of the Burbank Western Channel are municipal and domestic water supply, warm freshwater habitat, and wildlife habitat.

#### CWA 303(d) List of Water Quality Limited Segments

Under Section 303(d) of the CWA, states are required to identify water bodies that do not meet their water quality standards. Biennially, the LARWQCB prepares a list of impaired waterbodies in the region, referred to as the 303(d) list. The 303(d) list outlines the impaired waterbody and the specific pollutant(s) for which it is impaired. All waterbodies on the 303(d) list are subject to the development of a TMDL.

According to the SWRCB, Los Angeles River Reach 3, which is located southeast of the project site, is listed as an impaired water body. Impairments for Los Angeles River Reach 3 include the following: Ammonia, Copper, Indicator Bacteria, Nutrients (Algae), Toxicity, and Trash. (See Attachment F.)

## Total Maximum Daily Loads (TMDLs)

Once a water body has been listed as impaired on the 303(d) list, a TMDL for the constituent of concern (pollutant) must be developed for that water body. A TMDL is an estimate of the daily load of pollutants that a water body may receive from point sources, non-point sources, and natural background conditions (including an appropriate margin of safety), without exceeding its water quality standard. Those facilities and activities that are discharging into the water body, collectively, must not exceed the TMDL. In general terms, municipal, small Municipal Separate Storm Sewer System (MS4), and other dischargers within each watershed are collectively responsible for meeting the required reductions and other TMDL requirements by the assigned deadline.

TMDLs for the Los Angeles River Reach 3 and its tributaries have been established for the following pollutants: trash, toxicity, and nutrients.

The proposed Project would potentially discharge pollutants into the City and County storm drain system. Anticipated pollutants include sediments, nutrients, pesticides, trash, oil & grease, and metals. However, the Project Site shall implement LID BMPs as summarized above in Section 2.2.2 to ensure water quality is protected in downstream receiving waters. Through implementation of LID BMPs, it is anticipated that the pollutants of concern for the Project will be effectively treated.

## 2.3.3. Regional Groundwater Supplies and Quality

The City of Burbank overlies the San Fernando Valley Groundwater Basin (Basin). Replenishment of the Basin occurs primarily through percolation of rainfall throughout the watershed via permeable surfaces, spreading grounds, and groundwater migration from adjacent basins. Groundwater within the Basin generally flows towards the middle of the basin from the edges and then southernly towards the Coastal Plain of Los Angeles Groundwater Basin.

The San Fernando Basin is managed by the Upper Los Angeles River Area (ULARA) Watermaster. In a 1975 ruling by the California Supreme Court, the Pueblo Water Right of the City of Los Angeles to all water in the Basin were upheld. The Cities of Burbank and Glendale were given rights to all groundwater in the Basin derived from "return water" imported by the Cities from outside ULARA but delivered and utilized within ULARA.

The ULARA Watermaster submits an Annual Watermaster Report that identifies groundwater supplies, quality, and demand projections. Increases in demand as a result of redevelopment within the groundwater basin are planned for as part of ULARA long-term supply and demand planning.

Fuscoe Engineering, Inc.

## 3. SIGNIFICANCE THRESHOLDS

CEQA significance criteria are used to evaluate the degree of impact caused by a development project on environmental resources such as hydrology, surface water quality, and groundwater. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would impact any of the items listed below.

Would the Project:

- A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- C. 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:
  - (i) Result in a substantial erosion or siltation on- or off-site;
  - (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
  - (iii) 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
  - (iv) Impede or redirect flood flows?
- D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

These CEQA significance criteria are addressed below to determine if the Project will have any significant impacts on local and regional hydrology and water quality.

## 4. PROJECT IMPACT ANALYSIS

## A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

*Impact Analysis*: The Project will comply with all City and State grading permits and construction regulations, and will not violate any standards. 2.2.3 provides a discussion of the Construction General Permit and the actions that will be taken to comply during construction of the Project. LID BMPs will be implemented on-site during the operations and maintenance phase of the Project in order to ensure that no water quality standards are violated. The usage of LID BMPs will not adversely impact the quality of local groundwater supplies. The Project will not have a significant impact on surface water or groundwater quality standards or discharge requirements.

## B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

*Impact Analysis*: There are no groundwater supply wells located on the Project Site. See Section 2.2.1 for a discussion on groundwater quality and hydrology during operations of the proposed Project. As mentioned, impervious conditions will decrease under proposed Project conditions and increase incidental infiltration of stormwater runoff. The San Fernando Basin is managed by the Upper Los Angeles River Area Watermaster. The proposed potable water demands of the project are covered by long-term supply planning projections and will not adversely impact groundwater supplies. Therefore, no significant impact to groundwater sources is anticipated.

- C. 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:
  - (i) Result in a substantial erosion or siltation on- or off-site;

(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

(iii) 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

## (iv) Impede or redirect flood flows?

*Impact Analysis*: The Project is not anticipated to alter existing drainage patterns nor cause substantial erosion or siltation on or off site. The Project site is located in a largely built-out, impervious area and is not expected to contribute any additional sediment to water bodies or increase the risks of erosion. The greatest on-site erosion risk will occur during construction. Per Impact Analysis A above and Section Construction Impacts and Best Management Practices 2.2.3, the Project site will comply fully with the Construction General Permit and is not expected to generate excess sediment or be at risk of erosion.

As discussed in Section 2.1.1, the Project has been shown to reduce peak flows for the 10- and 25-year design storm events when compared to existing conditions based on a decrease in on-

site impervious surfaces and increased flow path length. Peak flows will be reduced as more runoffs will be retained on-site. Incidental infiltration will increase via the increase in pervious area, reducing off-site flows. Implementation of the project would not adversely impact the capacity of existing off-site City and County storm drain systems. Operation of the Project would not result in increased site runoff or create negative impacts to the capacity of the existing downstream storm drain system. No significant impact to flooding or storm drainage systems is anticipated. Three of the five existing catch basins on-site to remain will have new connections to the proposed private storm drain system and will not adversely affect the drainage pattern and create/contribute runoff water to exceed the existing City and County Storm Drain system's capacity.

## D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

*Impact Analysis*: The Project site is located entirely in FEMA Flood Zone X, outside of the 100year flood hazard area. The Project site is also located inland and is outside of all tsunami hazard zones and is not at risk of inundation by seiche. The Project site and surrounding areas are largely paved, and not at risk of inundation by mudflow. No significant impacts based on inundation by seiche, tsunami, or mudflow are anticipated. No significant impacts due to flooding are anticipated.

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

*Impact Analysis*: The Project will not obstruct implementation of either a water quality control plan or sustainable groundwater management plan. Proposed on-site LID features are designed to infiltrate, capture and reuse or biofilter stormwater, in accordance with local and regional permit regulations and regional groundwater management goals. No significant impacts are anticipated.

## 5. LEVEL OF SIGNIFICANCE

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

## ATTACHMENT A

## **REGULATORY FRAMEWORK**

## Surface Water Hydrology

## County of Los Angeles Hydrology Manual

The Project Site is located within the Los Angeles River Watershed, which covers over 830 square miles. The Los Angeles County Flood Control District (LACFCD) is responsible for providing flood protection, water conservation, recreation and aesthetic enhancement within this entire watershed. LACFCD is governed, as a separate entity, by the County of Los Angeles Board of Supervisors.

LACFCD consists of more than 3,000 square miles, 85 cities and approximately 2.1 million land parcels. It includes the vast majority of drainage infrastructure within incorporated and unincorporated areas in every watershed, including 500 miles of open channel, 2,800 miles of underground storm drain, and an estimated 120,000 catch basins. The Los Angeles County Department of Public Works (LACDPW) and LACFCD are responsible for the development of a hydrology manual for consistent hydrologic design throughout the County.

The LACDPW Hydrology Manual (January 2006) establishes the LACDPW hydrologic design procedures based on historic rainfall and runoff data collected within the County. The hydrologic techniques in the manual apply for the design of local storm drains, retention and detention basins, pump stations, and major channel projects.

The Project is required to utilize the 2006 Hydrology Manual and accompanying hydrologic tools including HydroCalc Calculator to calculate existing and proposed discharges and volumes from the Project.

## Surface Water Quality

## Clean Water Act

Controlling pollution of the nation's receiving water bodies has been a major environmental concern for more than three decades. In 1972, growing public awareness of the impacts of water pollution in the United States culminated in the establishment of the federal Clean Water Act<sup>2</sup> (CWA), which provided the regulatory framework for surface water quality protection.

The United States Congress amended the CWA in 1987 to specifically regulate discharges to waters of the United States from public storm drain systems and storm water flows from industrial facilities, including construction sites, and require such discharges be regulated through permits under the National Pollutant Discharge Elimination System (NPDES).<sup>3</sup> Rather than setting numeric effluent limitations for storm water and urban runoff, CWA regulation calls for the implementation of Best Management Practices (BMPs) to reduce or prevent the discharge of pollutants from these activities to the Maximum Extent Practicable (MEP) for urban runoff and meeting the Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) standards for construction storm water. Regulations and permits have been implemented at the federal, state, and local level to form a comprehensive regulatory framework to serve and protect the quality of the nation's surface water resources.

<sup>&</sup>lt;sup>2</sup> Also referred to as the Federal Water Pollution Control Act of 1972.

<sup>&</sup>lt;sup>3</sup> CWA Section 402(p).

In addition to reducing pollution with the regulations described above, the CWA also seeks to maintain the integrity of clean waters of the United States – in other words, to keep clean waters clean and to prevent undue degradation of others. As part of the CWA, the Federal Anti-Degradation Policy [40 Code of Federal Regulations (CFR) Section 131.12] states that each state "shall develop and adopt a statewide anti-degradation policy and identify the methods for implementing such policy..." [40 CFR Section 131.12(a)]. Three levels of protection are defined by the federal regulations:

Existing uses must be protected in all of the Nation's receiving waters, prohibiting any degradation that would compromise those existing uses;

Where existing uses are better than those needed to support propagation of aquatic wildlife and water recreation, those uses shall be maintained, unless the state finds that degradation is "...necessary to accommodate important economic or social development" [40 CFR Section 131.12(a)(2)]. Degradation, however, is not allowed to fall below the existing use of the receiving water; and

States must prohibit the degradation of Outstanding National Resource Waters, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreation or ecological significance.

## Federal Anti-Degradation Policy

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

## Porter-Cologne Water Quality Act

In the State of California, the State Water Resources Control Board (SWRCB) and local Regional Water Quality Control Boards (RWQCBs) have assumed the responsibility of implementing the United States Environmental Protection Agency's (USEPA) NPDES Program and other programs under the CWA such as the Impaired Waters Program and the Anti-Degradation Policy. The primary water quality control law in California is the Porter-Cologne Water Quality Act (Water Code Sections 13000 et seq.). Under the Porter-Cologne Act, the SWRCB issues joint federal NPDES Storm Water permits and state Waste Discharge Requirements (WDRs) to operators of municipal separate storm sewer systems (MS4s), industrial facilities, and construction sites to obtain coverage for the storm water discharges from these operations.

## 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 Toxic Rule

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

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

As required by the California Water Code (CWC), the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's 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.

#### 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 for Construction Activities

SWRCB Order No. 2009-0009-DWQ known as the "Construction General Permit" was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ which became effective on July 17, 2012. This NPDES permit establishes a risk-based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- 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 (SWPPPs). The SWPPP documents the

selection and implementation of 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.

As part of the Project, preparation and implementation of a SWPPP will be required. In addition, the Project will be required to obtain a Waste Discharger Identification Number (WDID) through the state's Storm Water Multiple Application and Report Tracking System (S.M.A.R.T.S.).

## 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 December 13, 2001, the LARWQCB adopted Order No. 01-182 under the CWA and the Porter-Cologne Act. This Order is the NPDES Permit or MS4 permit for municipal stormwater and urban runoff discharges within Los Angeles County. The requirements of this Order (the "Permit") cover 84 cities and most of the unincorporated areas of Los Angeles County. Under the Permit, LACFCD is designated as the Principal Permittee. The 84 Los Angeles County cities (including the City of Burbank) and unincorporated areas within Los Angeles County are the "Co-Permittees". The Principal Permittee helps to facilitate activities necessary to comply with the requirements outlined in the Permit but is not responsible for ensuring compliance of any of the Permittees.

Since adoption of Order No. 01-182, the LARWQCB has adopted Order No. R4-2012-0175, as amended by State Water Board Order WQ 2015-0075 NPDES Permit No. CAS004001 on November 8, 2012. This current permit will expire on December 28, 2017. As a Co-Permittee, the City of Burbank is subject to the requirements set forth in Order No. R4-2012-0175, as amended by State Water Board Order WQ 2015-0075, NPDES Permit No. CAS004001.

## City of Burbank Municipal Code

Title 9, Chapter 3, Article 4 of the City of Burbank Municipal Code sets forth the City's Stormwater and Urban Runoff Pollution Control Ordinance. The ordinance prohibits the discharge of runoff containing toxic materials, oils or chemicals, food and processing wastes, dirt and landscape debris, and concrete materials, among other constituents. The discharge prohibition is aimed at protecting the health of the public and aquatic ecosystems, as well as preserving the natural flow of storm drain systems.

Earthwork activities, including grading, are also overseen by the Burbank Municipal Code Title 9, Chapter 3, Article 4. Items 9-3-403-405 contain regulations pertaining to erosion control and drainage devices and provides requirements for flood, mudflow protection and general construction requirements.

## LID Plans

Under the current Los Angeles County Municipal NPDES Permit, permittees are required to implement a development planning program to address storm water pollution. These programs require project applicants for certain types of projects to implement Low Impact Development (LID) Plans throughout the operational life of their projects. The purpose of LID plans is to reduce the discharge of pollutants in storm water by outlining BMPs which must be incorporated into the design plans of new development and redevelopment. The Project falls within the definition of "redevelopment" under the MS4 Storm Water Permit which requires compliance with the Low Impact Development (LID) requirements.

#### Low Impact Development

LID is a stormwater strategy that is used to mitigate the impacts of runoff and stormwater pollution as close to its source as possible. Urban runoff discharged from municipal storm drain systems is one of the principal causes of water quality impacts in most urban areas. The stormwater may contain pollutants such as trash and debris, bacteria and viruses, oil and grease, sediments, nutrients, metals, and toxic chemicals that can negatively affect the ocean, rivers, plant and animal life, and public health.

LID encompasses a set of site design approaches and BMPs that are designed to address runoff and pollution at the source. These LID practices can effectively remove nutrients, bacteria, and metals, while reducing the volume and intensity of stormwater flows.

The Project is subject to compliance with Order No. R4-2012-0175, which became effective on November 8, 2012. The main purpose of this law is to ensure that development and redevelopment projects mitigate runoff in a manner that captures or treats rainwater at its source, while utilizing natural resources.

In accordance with Order No. R4-2012-0175, stormwater runoff shall be infiltrated, evapotranspired, captured and used, or treated through high removal efficiency BMPs, onsite, through stormwater management techniques. The LARWQCB has a BMP Hierarchy in which the project must follow when selecting the type or types of BMPs to be constructed on site. The following is the BMP Hierarchy, per Order No. R4-2012-0175 as amended by Order WQ 2015-0075 NPDES NO. CAS004001:

- On-site infiltration,
- On-site bioretention and/or harvest and use,
- On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit

## Hydromodification

In addition to the LID requirements listed in the MS4 Permit, the Permit also addresses requirements for Hydromodification as pertaining to the project. Per Part VI.D.7.c.iv of the Permit:

Each Permittee shall require all New Development and Redevelopment projects located within natural drainage systems as described in Part VI.D.7.c.iv.(1)(a)(iii) to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration. This shall be achieved by maintaining the project's pre-project stormwater runoff flow rates and durations.

However, per Part VI.D.7.c.iv.(1)(b)(iv) of the Permit, the Project is exempt from such requirements as runoff from the Project Site is discharged directly via storm drain to a receiving water that is not susceptible to hydromodification impacts. Specifically, the Project Site discharges via storm drain to the Los Angeles River, which is categorized as not susceptible to hydromodification. Therefore, the Project is not required to implement hydrologic control measures as mitigation for hydromodification impacts. In addition, as described below, implementation of the Project will result in a reduction of peak flows and volumes as compared to existing conditions, thereby satisfying hydromodification requirements in addition to the receiving water exemption.

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## Upper Los Angeles River Watershed Enhanced Watershed Management Program

The County of Los Angeles, the City of Burbank and all other cities in the Los Angeles Watershed are responsible for the implementation of watershed improvement plans or Enhanced Watershed Management Programs (EWMP) to improve water quality and assist in meeting the Total Maximum Daily Load (TMDL) milestones. An EWMP for the Upper Los Angeles River Watershed (ULAR EWMP, January 2016), prepared with the City of Los Angeles as the lead coordinating agency, was approved on March 29, 2016 by the LARWQCB. The vision of the EWMP is to utilize a multi-pollutant approach that maximizes retention and use of urban runoff as a resource for groundwater recharge and irrigation while also improving water quality and providing environmental, aesthetic, recreational, water supply and other community enhancements (ULAR EWMP, January 2016).

The EWMP identifies a toolbox of distributed and regional watershed control measures to address applicable stormwater quality regulations including the following:

- LID at the individual parcels
- Green Streets features within the public right-of-way and privately maintained streets
- Regional projects that retain and treat runoff from large upstream areas
- Institutional control measures to prevent transport of pollutants in the watershed
- •

## <u>Groundwater</u>

## California Groundwater Sustainability Act

On September 16, 2014, California Governor Jerry Brown signed into law a three-bill legislative package, known as the Sustainable Groundwater Management Act of 2014 (SGMA). The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention only if necessary to protect the resource.

The SGMA requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. The act provides substantial time – 20 years – for GSAs to implement plans and achieve long-term groundwater sustainability. It protects existing surface water and groundwater rights and does not impact current drought response measures.

The California Water Commission (CWC) requires a statewide prioritization of California's groundwater basins using the following eight criteria:

- Overlying population;
- Projected growth of overlying population;
- Public supply wells;
- Total wells;
- Overlying irrigated acreage;
- Reliance on groundwater as the primary source of water;
- Impacts on the groundwater—including overdraft, subsidence, saline intrusion, and other water quality degradation;
- Any other information determined to be relevant by the Department.

Water Code §10720.8 identifies adjudicated areas in SGMA, which have an existing defined entity administering the adjudication. Under SGMA, adjudicated portions of basins are exempt from

developing a groundwater sustainability plan (GSP) and forming a groundwater sustainability agency (GSA). However, the entities administering the adjudications are subject to submitting annual reports to DWR by April 1 each year. SGMA requires that annual reports include the following information for the portion of the basin subject to adjudication:

- a) Groundwater elevation data unless submitted pursuant to Water Code §10932.
- b) Annual aggregated data identifying groundwater extraction for the preceding water year.
- c) Surface water supply used for or available for use for groundwater recharge or in-lieu use.
- d) Total water use.
- e) Change in groundwater storage.
- f) The annual report submitted to the court

The San Fernando Valley Groundwater Basin is adjudicated, and managed by the ULARA Watermaster, and is therefore exempted from developing a GSA and GSP.

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

As required by the CWC, the LARWQCB has adopted a plan entitled "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (Basin Plan). Specifically, the Basin Plan designates beneficial uses for surface and groundwaters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's 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 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.

## Safe Drinking Water Act (SDWA)

The federal Safe Drinking Water Act (SDWA), established in 1974, sets drinking water standards throughout the country and is administered by the USEPA. The drinking water standards established in the SDWA, as set forth in the CFR, are referred to as the National Primary Drinking Water Regulations (Primary Standards, Title 40, CFR Part 141) and the National Secondary Drinking Water Regulations (Second Standards, 40 CFR Part 143). California passed its own SDWA 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, 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

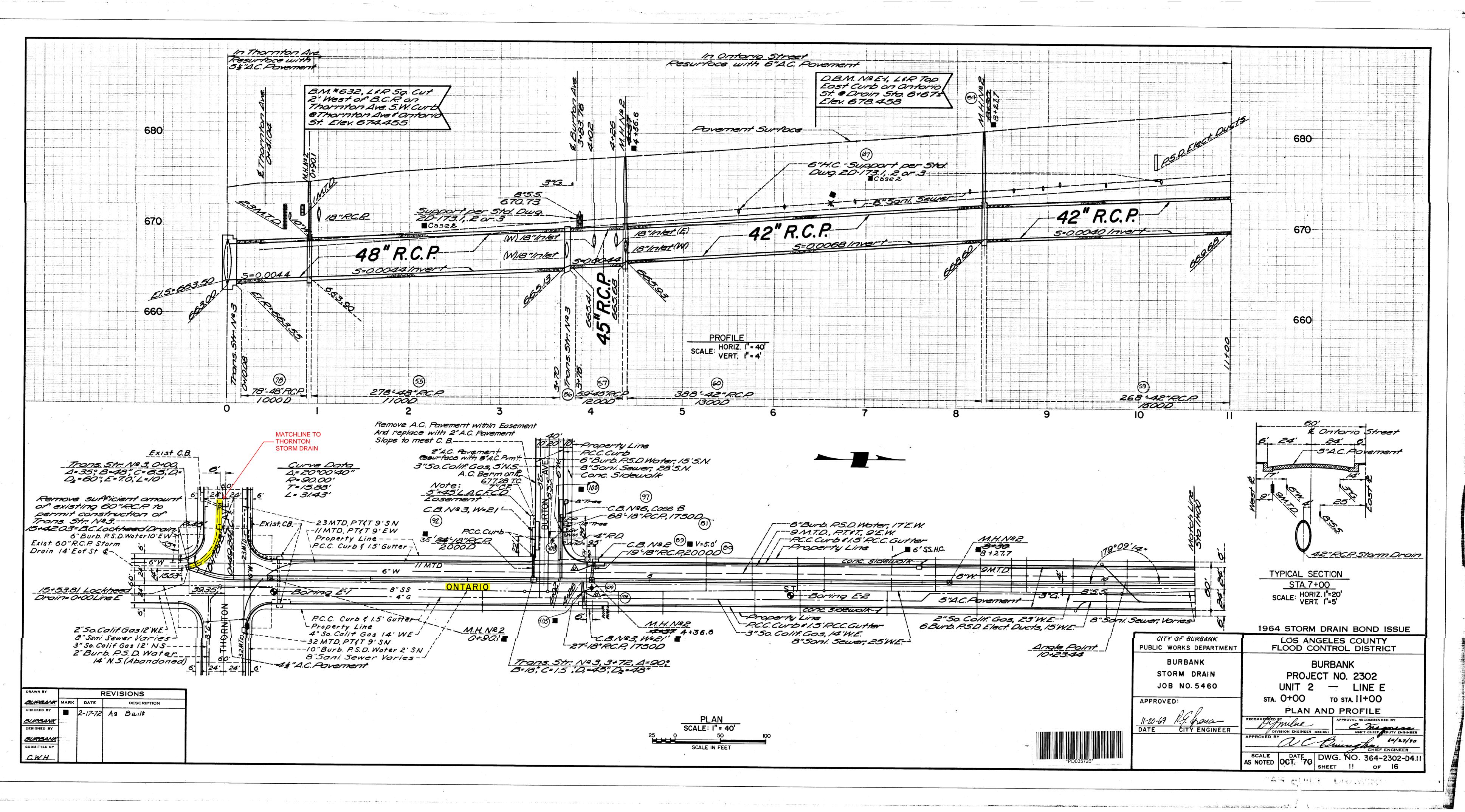
The California Water Plan (The Plan) provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The Plan, which is updated every five years, presents basic data and information on California's water resources including 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

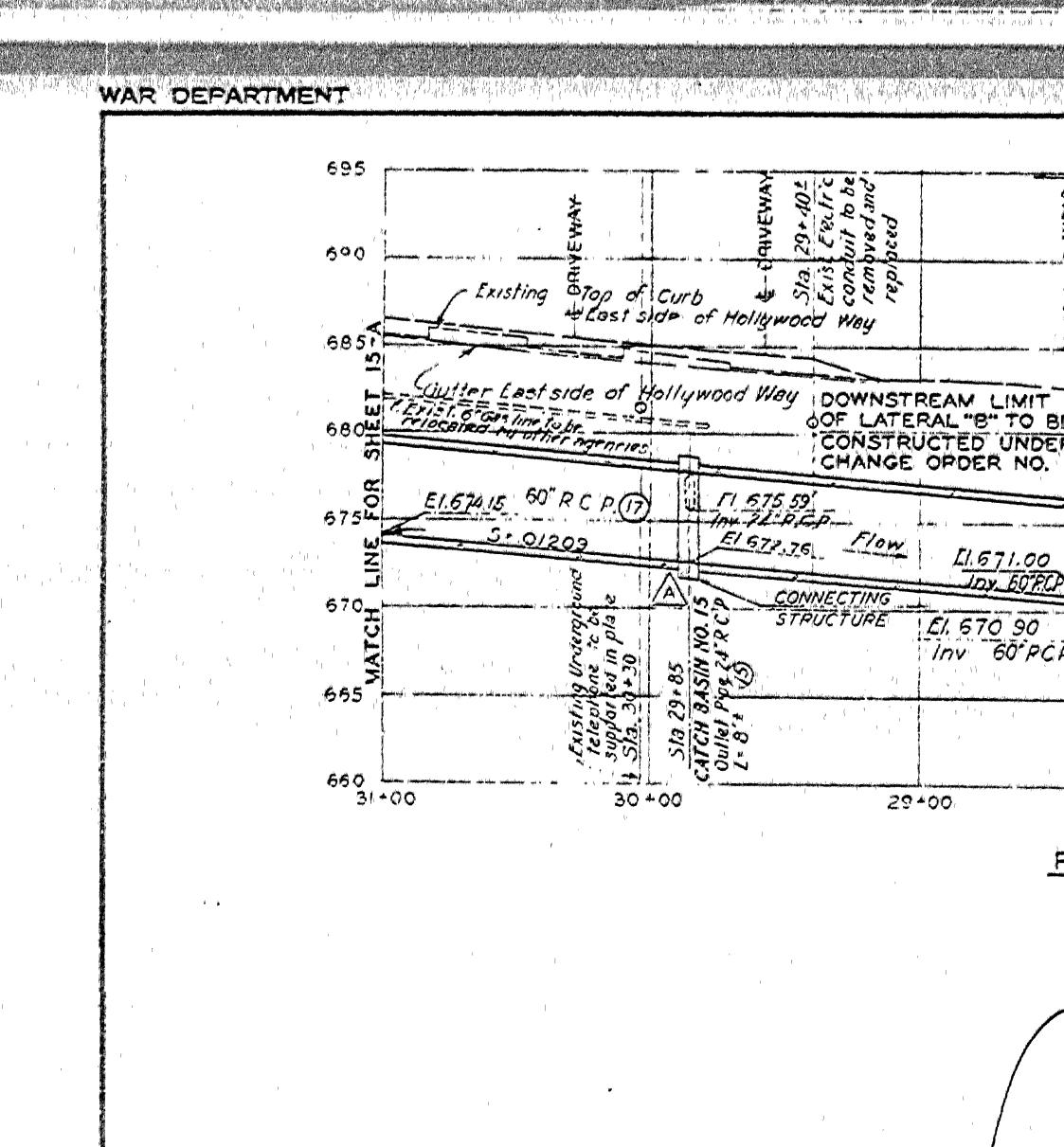
proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs.

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

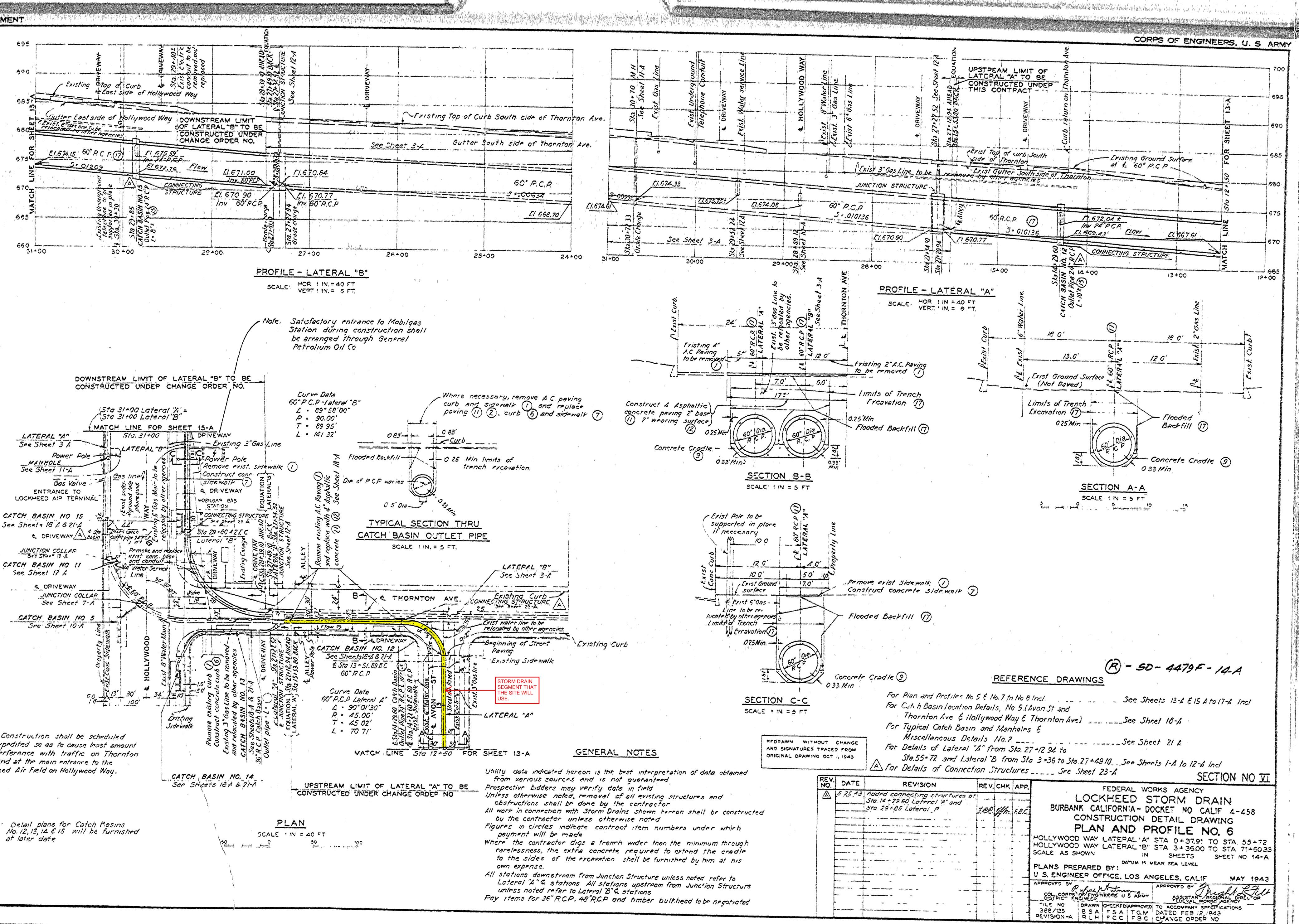
## ATTACHMENT B

## LOCAL STORM DRAIN SYSTEM EXHIBIT





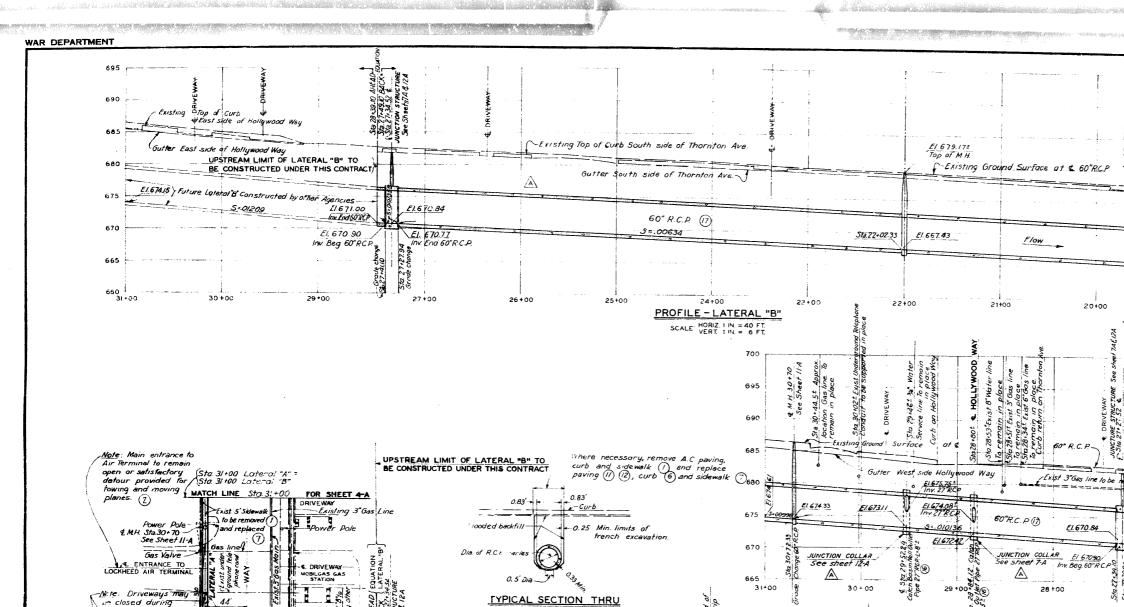


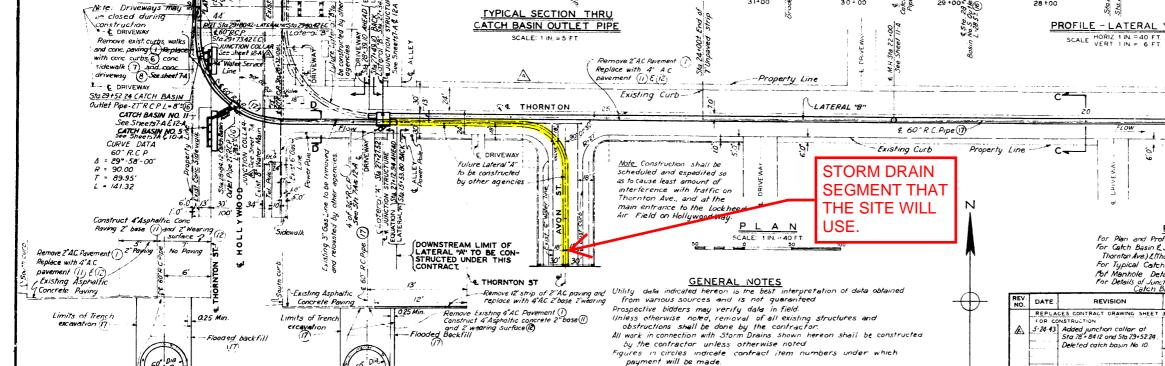


Note Construction shall be scheduled and expedited so as to cause least amount of interference with traffic on Thornton Ave, and at the main entrance to the Lockheed Air Field on Hollywood Way.

Note: Detail plans for Catch Plasins No. 12, 13, 14 € 15 will be furnished

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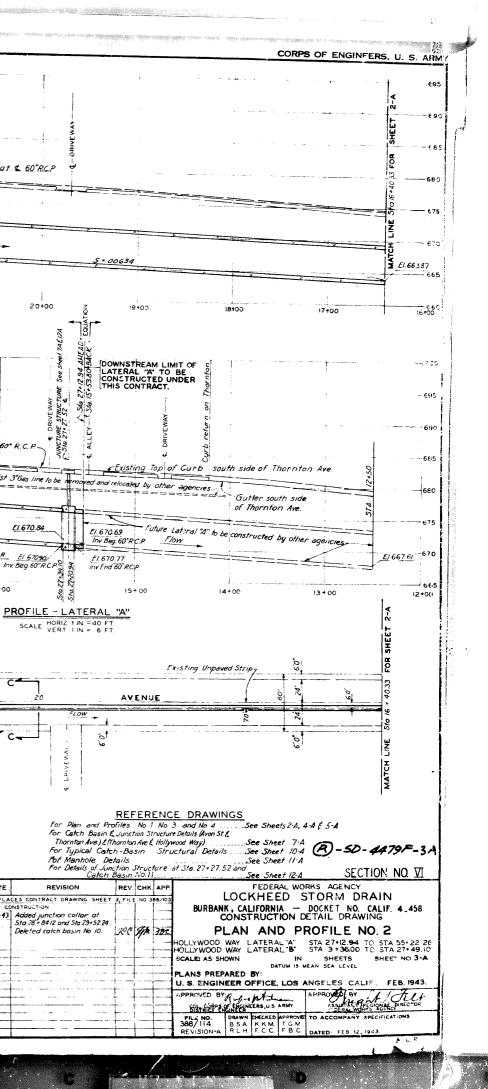
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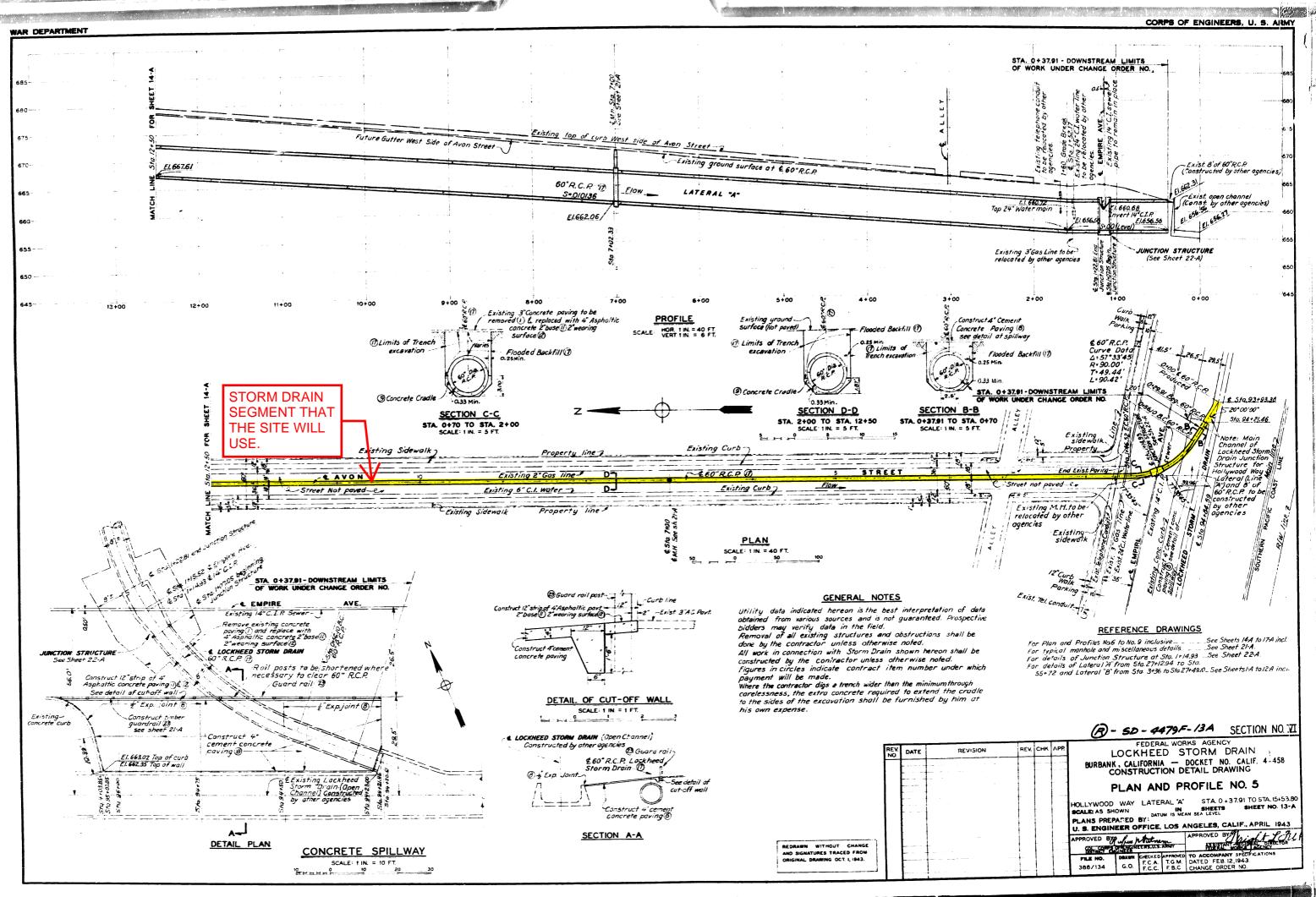
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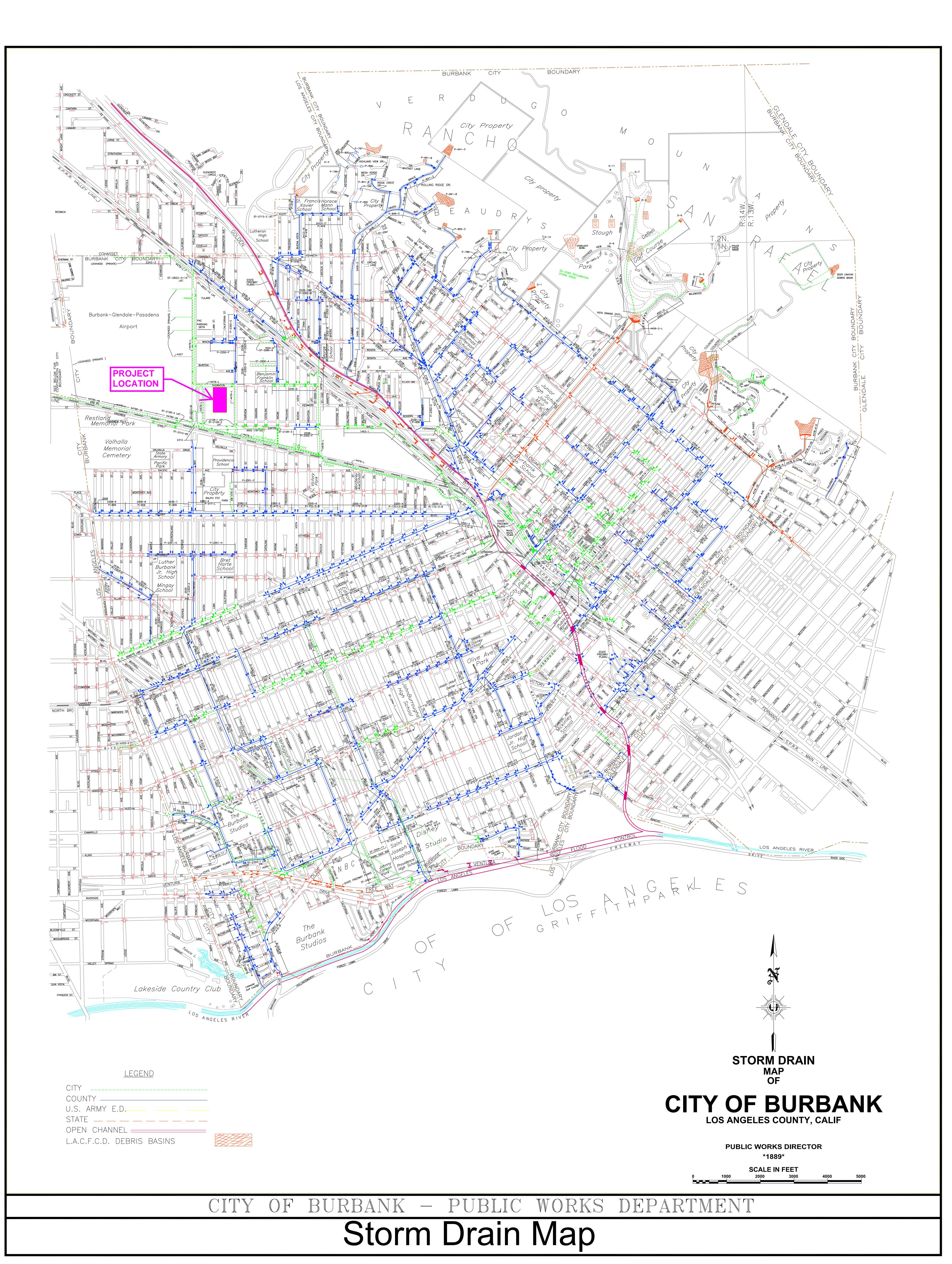
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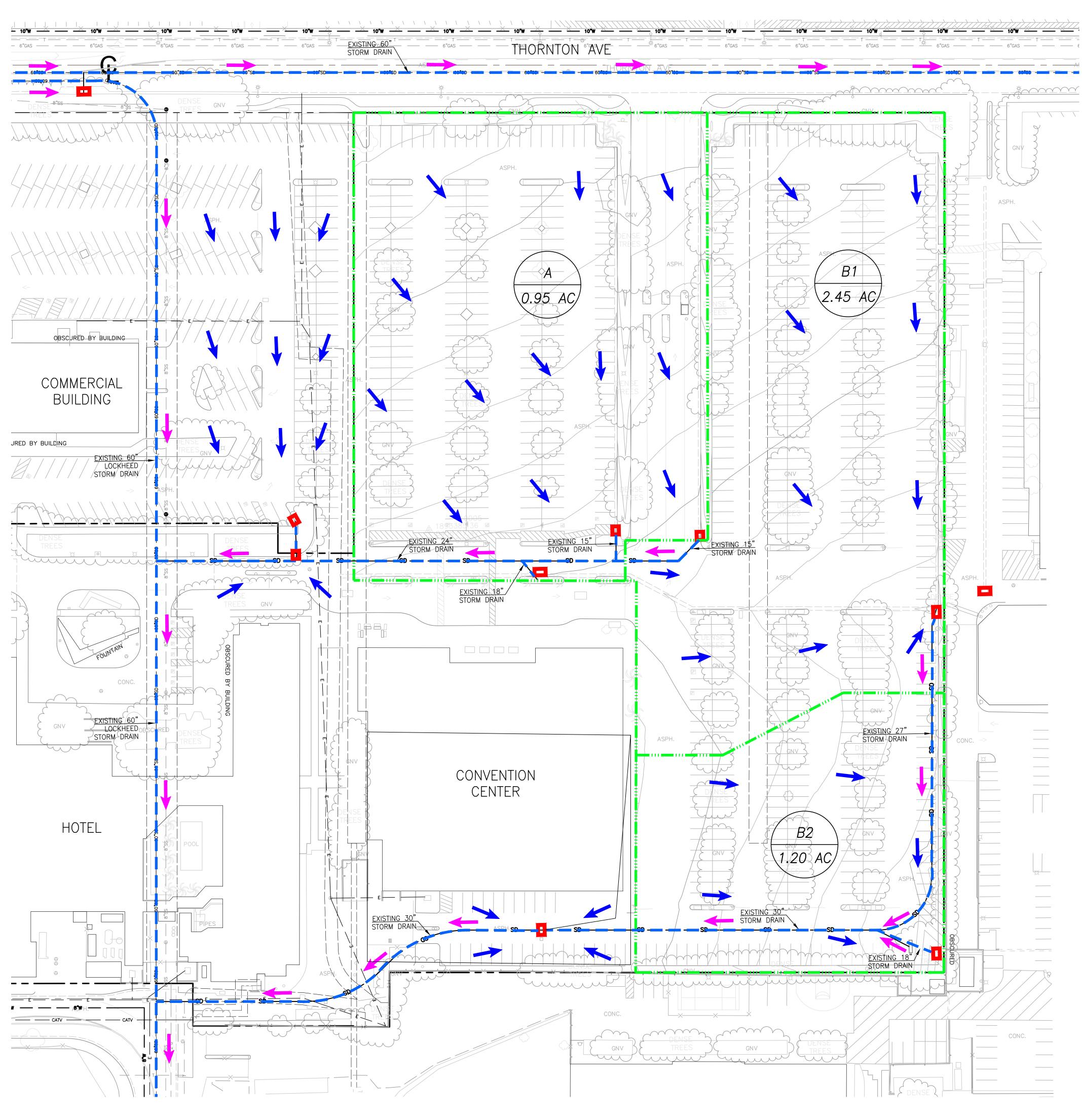




## ATTACHMENT C

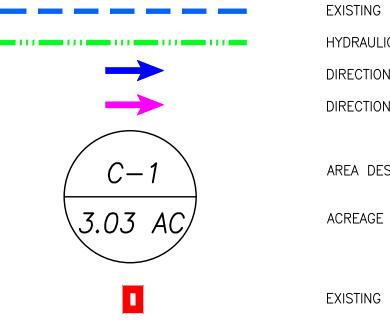
## Existing On-site Hydrology Map

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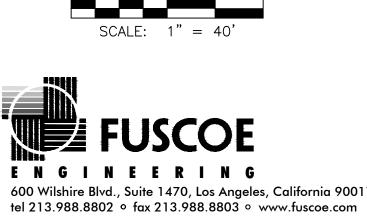
EXISTING CONDITION HYDROLOGY DUAL BRAND HOTEL BURBANK, CA 8/14/2023

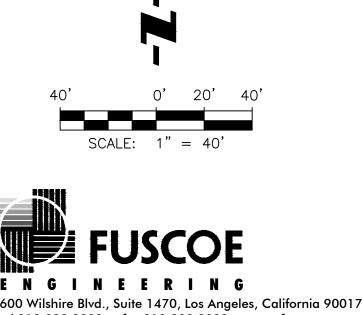
## LEGEND



# NOTE

ONSITE STORM	DNSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED.							
	EXISTING CONDITION STORM EVENTS							
DRAINAGE AREA	AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)				
A	2.52	91	5.5	7.3				
B1	2.45	91	5.4	7.1				
B2	1.20	91	3.1	3.8				
TOTAL	6.17	91 (AVERAGE)	14.0	18.2				





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EXISTING CATCH BASIN

AREA DESIGNATION

EXISTING STORM DRAIN HYDRAULIC BOUNDARY DIRECTION OF SURFACE FLOW DIRECTION OF STORM DRAIN FLOW

## ATTACHMENT D

## HYDROCALC HYDROLOGY RESULTS FOR EXISTING SITE

Fuscoe Engineering, Inc.

## Peak Flow Hydrologic Analysis

File location: F:/Projects/4147/001/\_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Burbank Hotel Report Existing.pdf Version: HydroCalc 1.0.3

Input Parameters			
Project Name	Burbank Hotel - Existing		
Subarea ID	Subarea A		
Area (ac)	2.52		
Flow Path Length (ft)	406.0		
Flow Path Slope (vft/hft)	0.02		
50-yr Rainfall Depth (in)	7.05		
Percent Impervious	0.91		
	15		
Design Storm Frequency Fire Factor	10-yr		
LID	0 False		
	1 0150		
Output Results			
Modeled (10-yr) Rainfall Depth (in)	5.0337		
Peak Intensity (in/hr)	2.7566		
Undeveloped Runoff Coefficient (Cu)	0.3813		
Developed Runoff Coefficient (Cd)	0.8533		
Time of Concentration (min)	6.0		
Clear Peak Flow Rate (cfs)	5.9277		
Burned Peak Flow Rate (cfs)	5.9277		
24-Hr Clear Runoff Volume (ac-ft)	0.8695		
24-Hr Clear Runoff Volume (cu-ft)	37874.6235		
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Input Parameters	
Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B1
Area (ac)	2.45
Flow Path Length (ft)	450.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False
Output Results	
Modeled (10-yr) Rainfall Depth (in)	5.0337
Peak Intensity (in/hr)	2.564
Undeveloped Runoff Coefficient (Cu)	0.3582
Developed Runoff Coefficient (Cd)	0.8512
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	5.3472
Burned Peak Flow Rate (cfs)	5.3472
24-Hr Clear Runoff Volume (ac-ft)	0.8453
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24-Hr Clear Runoff Volume (cu-ft) Hydrograph (Burbank Hotel - 5 4 4 - 2 - 1 - 1 -	36820.3271

Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B2
Area (ac)	1.2
Flow Path Length (ft)	290.0
Flow Path Slope (vft/hft) 50-yr Rainfall Depth (in)	0.02 7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	10-yr
Fire Factor	0
LID	False
Output Results	
Modeled (10-yr) Rainfall Depth	(in) 5.0337
Peak Intensity (in/hr)	3.0032
Undeveloped Runoff Coefficient	(Cu) 0.4109
Developed Runoff Coefficient (C	
Time of Concentration (min)	5.0 3.0849
Clear Peak Flow Rate (cfs) Burned Peak Flow Rate (cfs)	3.0849
24-Hr Clear Runoff Volume (ac-	
24-Hr Clear Runoff Volume (cu-	ft) 18036.8386
3.5 Hydrograph	(Burbank Hotel - Existing: Subarea B2)
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langut Devenentere	
Input Parameters	Duck and Hatal Fridting
Project Name Subarea ID	Burbank Hotel - Existing Subarea A
Area (ac)	2.52
Flow Path Length (ft)	406.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	$\frac{1}{0}$
LID	False
<b>Output Results</b> Modeled (25-yr) Rainfall Depth (in) Peak Intensity (in/hr)	6.1899 3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8619
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.0215
Burned Peak Flow Rate (cfs)	8.0215
24-Hr Clear Runoff Volume (ac-ft)	1.0699
24-Hr Clear Runoff Volume (cu-ft)	46606.8362
9 Hydrograph (Burbank Hotel -	Existing: Subarea A)
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7	
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0 200 400 600 800	1000 1200 1400 1600
0 200 400 800 800 Time (minute	

Input Parameters	
Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B1
Area (ac)	2.45
Flow Path Length (ft)	450.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.91
Soil Type	15 25 yr
Design Storm Frequency Fire Factor	25-yr 0
LID	False
Output Results	
Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.3898
Undeveloped Runoff Coefficient (Cu)	0.4479
Developed Runoff Coefficient (Cd)	0.8593
Time of Concentration (min)	6.0
Clear Peak Flow Rate (cfs)	7.1365
Burned Peak Flow Rate (cfs)	7.1365
24-Hr Clear Runoff Volume (ac-ft)	1.0402
24-Hr Clear Runoff Volume (cu-ft)	45309.1255
Hydrograph (Burbank Hotel - Exist	
2-	
Time (minutes)	

Input Parameters Project Name	Burbank Hotel - Existing
Subarea ID	Subarea B2
Area (ac)	1.2
Flow Path Length (ft)	290.0
Flow Path Slope (vft/hft) 50-yr Rainfall Depth (in)	0.02 7.05
Percent Impervious	0.91
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False
Output Results	
Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8619
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.8198 3.8198
Burned Peak Flow Rate (cfs) 24-Hr Clear Runoff Volume (ac-ft)	0.5095
24-Hr Clear Runoff Volume (cu-ft)	22193.7315
4.0 Hydrograph (Burb	ank Hotel - Existing: Subarea B2)
4.0 Hydrograph (Burb	pank Hotel - Existing: Subarea B2)
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### ATTACHMENT E

### FEMA FLOODPLAIN MAP

### NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 11. The horizontal datum was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA, N/NGS12 National Geodetic Survey SSMC-3, #9202

1315 East-West Highway Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713–3242, or visit its website at http://www.ngs.noaa.gov/.

**Base map** information shown on this FIRM was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1994 or later and from National Geospatial Intelligence Agency imagery produced at a scale of 1:4,000 from photography dated 2003 or later.

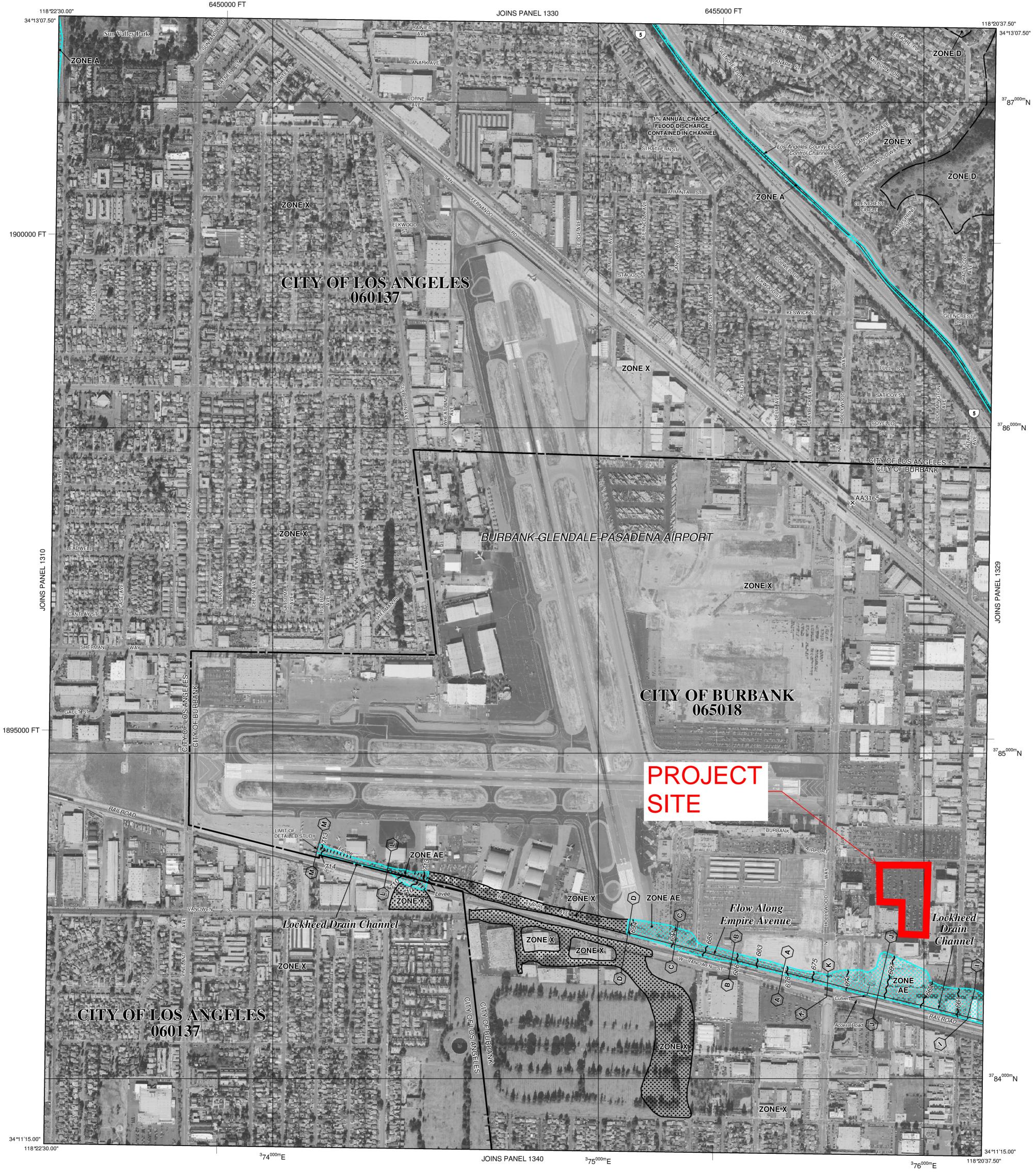
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1–800–358–9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, *a Flood Insurance Study report*, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1–800–358–9620 and its website at http://www.msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP**(1-877-336-2627) or visit the FEMA website at http://www.fema.gov/.



	LEGEND
388888	SPECIAL FLOOD HAZARD AREAS (SFHAS) SUBJECT TO
The 10/ error	INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
that has a	ual chance flood (100-year flood), also known as the base flood, is the flood 1% chance of being equaled or exceeded in any given year. The Special
	A Area is the area subject to flooding by the 1% annual chance flood. Areas Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base
Flood Elevation	n is the water-surface elevation of the 1% annual chance flood.
ZONE A ZONE AE	No Base Flood Elevations determined. Base Flood Elevations determined.
ZONE AE	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood
	Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities
	also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently
	decertified. Zone AR indicates that the former flood control system is
	being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal
	flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood
ZONE VE	Elevations determined. Coastal flood zone with velocity hazard (wave action); Base Flood
ZONE VE	Elevations determined.
	FLOODWAY AREAS IN ZONE AE
	is the channel of a stream plus any adjacent floodplain areas that must be encroachment so that the 1% annual chance flood can be carried without
substantial in	ncreases in flood heights.
	OTHER FLOOD AREAS
ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood
ZONEX	with average depths of less than 1 foot or with drainage areas less than
	1 square mile; and areas protected by levees from 1% annual chance flood.
	OTHER AREAS
ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.
	COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
لاحددو	
	OTHERWISE PROTECTED AREAS (OPAs)
CBRS areas a	and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary     Floodway boundary
	– Zone D boundary
•••••	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
~~~~ 51	
(EL S	987) Base Flood Elevation value where uniform within zone; elevation in feet*
* Referenced	to the North American Vertical Datum of 1988 (NAVD 88)
(A)	Cross section line
23	
G	Geographic coordinates referenced to the North American
97°07'30", :	32°22'30" Datum of 1983 (NAD 83)
<sup>42</sup> 75 <sup>0</sup>	<sup>00m</sup> N 1000-meter Universal Transverse Mercator grid values, zone 11
c0000	5000-foot grid ticks: California State Plane coordinate
60000	00 F1 system, V zone (FIPSZONE 0405), Lambert Conformal Conic
DX55	510 Bench mark (see explanation in Notes to Users section of this FIRM panel)
	this FIRM panel)
DX55 • M1	.5 River Mile
	<ul> <li>.5 River Mile</li> <li>MAP REPOSITORIES</li> </ul>
	<ul> <li>this FIRM panel)</li> <li>.5 River Mile</li> <li>MAP REPOSITORIES</li> <li>Refer to Map Repositories list on Map Index</li> </ul>
	<ul> <li>this FIRM panel)</li> <li>5 River Mile</li> <li>MAP REPOSITORIES</li> <li>Refer to Map Repositories list on Map Index</li> <li>EFFECTIVE DATE OF COUNTYWIDE</li> </ul>
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• M1 For communit Map History f	<ul> <li>this FIRM panel)</li> <li>5 River Mile</li> <li>MAP REPOSITORIES</li> <li>Refer to Map Repositories list on Map Index</li> <li>EFFECTIVE DATE OF COUNTYWIDE</li> <li>FLOOD INSURANCE RATE MAP</li> <li>September 26, 2008</li> <li>EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL</li> </ul>
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• M1 For communit Map History f To determine	<ul> <li>this FIRM panel)</li> <li>5 River Mile</li> <li>MAP REPOSITORIES</li> <li>Refer to Map Repositories list on Map Index</li> <li>EFFECTIVE DATE OF COUNTYWIDE</li> <li>FLOOD INSURANCE RATE MAP</li> <li>September 26, 2008</li> <li>EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL</li> </ul> ty map revision history prior to countywide mapping, refer to the Community table located in the Flood Insurance Study report for this jurisdiction. a if flood insurance is available in this community, contact your insurance
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## ATTACHMENT F

## 2014-16 303(D) LIST

10/9/2019

https://www.waterboards.ca.gov/water\_issues/programs/tmdl/2014\_16state\_ir\_reports/category5\_report.shtml

Statewide October 3, 2017

2014 and 2016 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS\*

CATEGORY 5

### Category 5 criteria: 1) A water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment. \* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

\*\* TMDL requirement status definitions for listed pollutants are: A= TMDL still required, B= being addressed by USEPA approved TMDL, C= being addressed by action other than a TMDL, ALT= being addressed by USEPA approved TMDL alternative \*\*\* Dates relate to the TMDL requirement status, so a date for A= TMDL scheduled completion date, B= Date USEPA approved TMDL, and C= Completion date for action other than a TMDL

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	POLLUTANT     POTENTIAL SOU  Relevant Notes
1	<u>Big River Beach at</u> <u>Mendocino Bay</u>	Coastal & Bay Shoreline	1113.300405 / 18010108	<ul> <li>Indicator Bacteria         <ul> <li>Source Unknown</li> </ul> </li> </ul>
1	<u>Bodega HU,</u> <u>Bodega Harbor HA</u>	Bay & Harbor	11522000 / 18010111	<ul> <li><u>Invasive Species</u></li> <li>Source Unknown</li> </ul>
1	Bodega HU, Estero Americano HA, Americano Creek	River & Stream	11530000 / 18010111	<ul> <li><u>Nutrients</u></li> <li>Source Unknown</li> </ul>
1	Bodega HU, Estero Americano HA, estuary	Estuary	11530012 / 18010111	<ul> <li><u>Nutrients</u></li> <li>Source Unknown</li> </ul>
				<ul> <li><u>Sedimentation/Siltation</u></li> <li>Source Unknown</li> </ul>
1	Bodega HU, Estero de San Antonio HA, Stemple Creek/Estero de San Antonio	River & Stream	1115.400001,1115.400002,1115.400003 / 18010111	<ul> <li><u>Nutrients</u></li> <li>Source Unknown</li> </ul>
				<ul> <li><u>Sediment</u></li> <li>Source Unknown</li> </ul>
1	<u>Campbell Cove</u>	Coastal & Bay Shoreline	1115.210000,1115.220000 / 18010111	<ul> <li><u>Indicator Bacteria</u></li> <li>Source Unknown</li> </ul>
1	<u>Caspar Headlands</u> <u>State Beach</u>	Coastal & Bay Shoreline	1113.300404,1113.300405 / 18010108	<ul> <li><u>Indicator Bacteria</u></li> <li>Source Unknown</li> </ul>
1	<u>Clam Beach (near</u> <u>Mad River mouth)</u>	Coastal & Bay Shoreline	1109.100101 / 18010102	<ul> <li><u>Indicator Bacteria</u></li> <li>Source Unknown</li> </ul>

URCES	ESTIMATED AREA ASSESSED	YEAR R	EQUIREMEN	NT DATE***
	3.9 Miles	2010	5A	2025
	810 Acres	2006	5A	2025
	38 Miles	1996	5A	2025
	199 Acres	1996	5A	2025
<u>)n</u>	199 Acres	1992	5A	2025
	87 Miles	2016	5A	2025
	87 Miles	2006	5A	2025
	0.24 Miles	2006	5A	2019
	0.19 Miles	2010	5A	2025
	1.5 Miles	2012	5A	2025

https://www.waterboards.ca.gov/water\_issues/programs/tmdl/2014\_16state\_ir\_reports/category5\_report.shtml

4	Los Angeles River	River &	40515010 / 18070104	<ul> <li><u>Ammonia</u></li> </ul>
	Reach 2 (Carson to			<ul> <li>Nonpoint Source</li> </ul>
	<u>Figueroa Street)</u>			<ul> <li>Point Source</li> </ul>
				Corner

• Source Unknown

#### • Nutrients (Algae)

- Point Source
- Natural Sources

#### • <u>Trash</u>

- Nonpoint Source
- Surface Runoff
- Urban Runoff/Stor

#### • <u>Ammonia</u>

• Nonpoint Source • Point Source

#### • <u>Copper</u>

• Source Unknown

#### • Indicator Bacteria

• Source Unknown

#### • Nutrients (Algae)

- Nonpoint Source
- Point Source
- <u>Toxicity</u>
- Source Unknown

#### • <u>Trash</u>

- Nonpoint Source
- Surface Runoff

WATER BODY WATER REGION NAME TYPE

40521000 / 18070104

Los Angeles River River & 4 **<u>Reach 3 (Figueroa</u>** Stream St. to Riverside Dr.)

• POTENTIAL SOURCES

**Relevant** Notes

# <u>Copper</u>

- Indicator Bacteria
  - Source Unknown

#### • Lead

• Nonpoint Source • Point Source

- Nonpoint Source
- <u>Oil</u>

URCES	AREA	YEAR R	TMDL EQUIREMEN STATUS**	NT DATE***
	ASSESSED	LISIED	51AI US""	
	19 Miles	1996	5B	2004
	19 Miles	2006	5B	2005
	19 Miles	2014	5B	2012
	19 Miles	1996	5B	2005
	19 Miles	1996	5B	2004
	19 Miles	1996	5A	2019
	19 Miles	1996	5B	2008
rm Sewers				
	7.9 Miles	1996	5B	2004
	7.9 Miles	2006	5B	2008
	7.9 Miles	2014	5B	2012
	7.9 Miles	1996	5B	2004
	7.9 Miles	2014	5A	2027
	7.9 Miles	1996	5B	2008

ESTIMATED FIRST

TMDL

• Urban Runoff/Storm Sewers

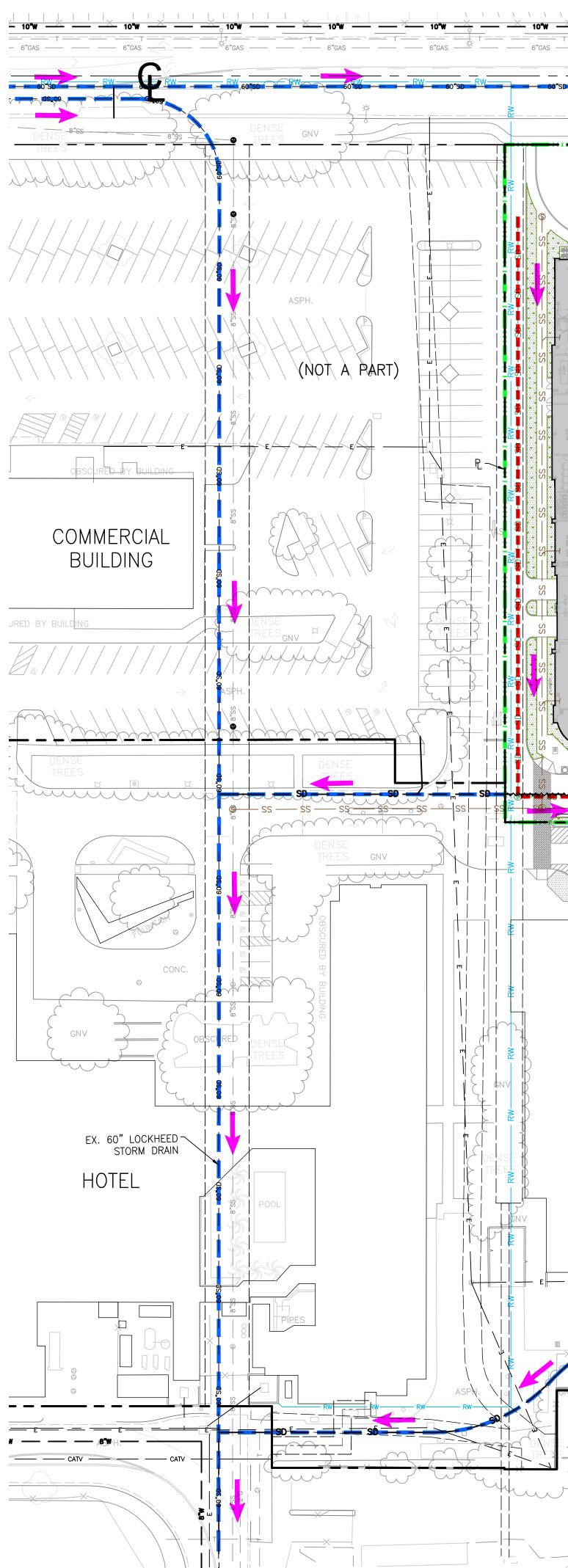
10/9/2019	https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/cat	tegory5_report.shtml				
REGION WATER BODY WATER NAME TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT • POTENTIAL SOURCES Relevant Notes		YEAR RI	TMDL EQUIREMEN STATUS**	T DATE***
4 <u>Los Angeles River</u> River & <u>Reach 4 (Sepulveda</u> Stream <u>Dr. to Sepulveda</u> <u>Dam)</u>	40521000 / 18070105	<ul> <li><u>Indicator Bacteria</u></li> <li>Source Unknown</li> </ul>	11 Miles	2014	5A	2019
,		<ul> <li><u>Nutrients (Algae)</u></li> <li>Nonpoint Source</li> <li>Point Source</li> </ul>	11 Miles	1996	5B	2004
		<ul> <li><u>Toxicity</u></li> <li>Source Unknown</li> </ul>	11 Miles	2014	5A	2027
		<ul> <li>Trash         <ul> <li>Nonpoint Source</li> <li>Surface Runoff</li> <li>Urban Runoff/Storm Sewers</li> </ul> </li> </ul>	11 Miles	1996	5B	2008
4 <u>Los Angeles River</u> River & <u>Reach 5 ( within</u> Stream <u>Sepulveda Basin)</u>	40521000 / 18070105	<ul> <li><u>Ammonia</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	1996	5B	2004
<u>eeparrean Dasmi</u>		<ul> <li><u>Benthic Community Effects</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	2014	5A	2025
		<ul> <li><u>Copper</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	2006	5B	2005
		<ul> <li><u>Lead</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	2006	5B	2005
		<ul> <li><u>Nutrients (Algae)</u></li> <li>Nonpoint Source</li> <li>Point Source</li> </ul>	1.9 Miles	1996	5B	2004
		<ul> <li><u>Oil</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	1996	5A	2019
		<ul> <li><u>Toxicity</u></li> <li>Source Unknown</li> </ul>	1.9 Miles	2014	5A	2027
		<ul> <li><u>Trash</u> <ul> <li>Nonpoint Source</li> <li>Surface Runoff</li> <li>Urban Runoff/Storm Sewers</li> </ul> </li> </ul>	1.9 Miles	1996	5B	2008
4 <u>Los Angeles River</u> River & <u>Reach 6 (Above</u> Stream <u>Sepulveda Flood</u> <u>Control Basin)</u>	40521000 / 18070105	<ul> <li><u>Copper</u></li> <li>Source Unknown</li> </ul>	7 Miles	2014	5B	2008
,		<ul> <li><u>Indicator Bacteria</u></li> <li>Source Unknown</li> </ul>	7 Miles	2014	5B	2012

• Source Unknown

### ATTACHMENT G

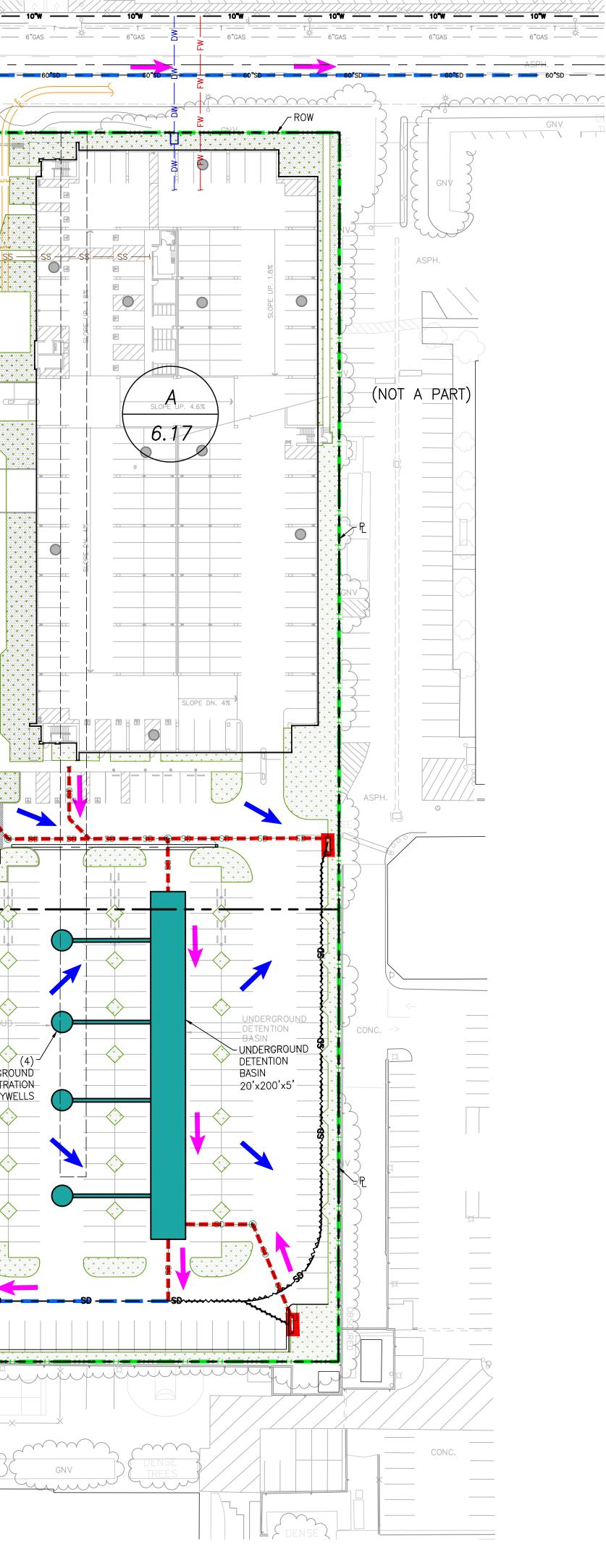
### PROPOSED ON-SITE HYDROLOGY MAP

Fuscoe Engineering, Inc.

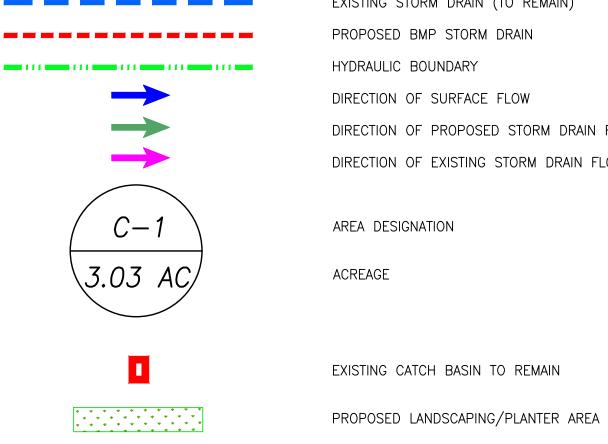


## 6"GAS \_\_\_\_\_ 6"GAS \_\_<del>^^</del> \_\_\_\_ THORTON AVE. - ORNERN AVE \_\_\_\_\_ \_ \_ \_\_\_ \_\_ \_\_ \_\_\_ \_\_\_\_\_\_ AS ROW -<u>9-</u> (NOT A PART) \_\_\_\_\_ \_\_\_\_\_ E POD hjulula, 20 р Б Ó · · · · · SP ----- SS —— SS —— SS <del>—— SS —</del> TREES GNV - mm II TRATION YWELLS UNDERGROUND CONVENTION INFILTRATION DRYWELLS CENTER EX. 30" STORM DRAIN munt Sphilingenter \_\_\_\_\_ LUN . w $\square$ GNV 5 GNV hand the hand the hand the \_\_\_\_X\_\_\_\_

PROPOSED CONDITION HYDROLOGY DUAL BRAND HOTEL BURBANK, CA 8/14/2023



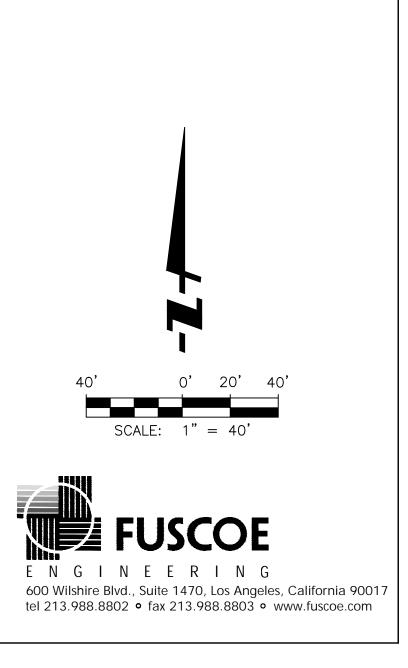
## LEGEND



## NOTES:

ONSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED. EXISTING CATCH BASINS WILL HAVE PROPOSED PIPING ROUTED TO PROPOSED BMP LOCATIONS.

PROPOSED CONDITION STORM EVENTS					
DRAINAGE AREA	AREA (ACRES)	PLANTER AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)
A-1	6.17	0.94	85	9.5	12.9



EXISTING STORM DRAIN (TO REMAIN) PROPOSED BMP STORM DRAIN HYDRAULIC BOUNDARY DIRECTION OF SURFACE FLOW DIRECTION OF PROPOSED STORM DRAIN FLOW DIRECTION OF EXISTING STORM DRAIN FLOW AREA DESIGNATION

### ATTACHMENT H

### HYDROCALC HYDROLOGY RESULTS FOR PROPOSED SITE

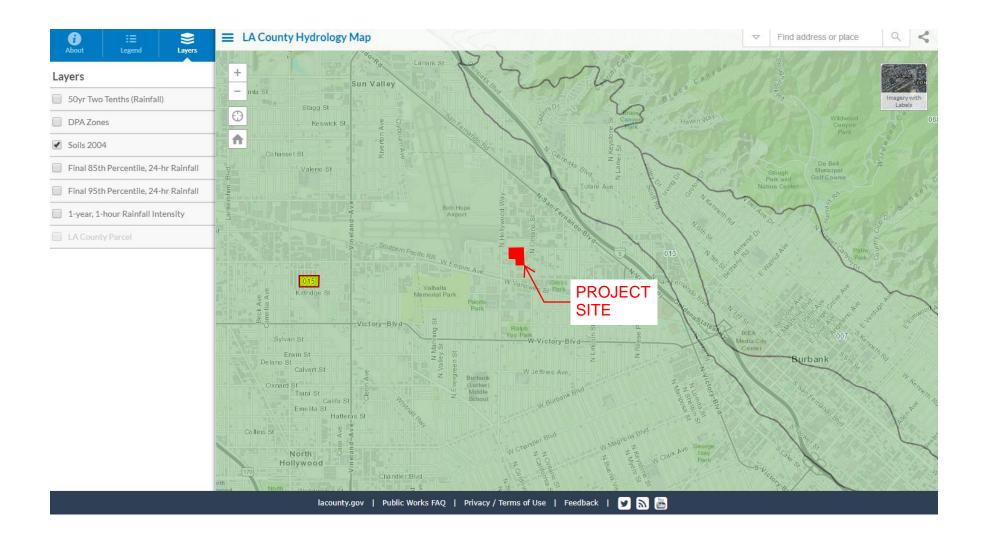
Input Parameters		
Project Name	Burbank Hotel - Proposed	
Subarea ID	Total	
Area (ac)	6.17	
Flow Path Length (ft) Flow Path Slope (vft/hft)	1200.0	
50-yr Rainfall Depth (in)	0.02 7.05	
Percent Impervious	0.85	
Soil Type	15	
Design Storm Frequency	10-yr	
Fire Factor	0	
LID	False	
Output Results	F 0007	
Modeled (10-yr) Rainfall Depth (in)	5.0337	
Peak Intensity (in/hr) Undeveloped Runoff Coefficient (Cu)	1.9167 0.2786	
Developed Runoff Coefficient (Cd)	0.2786	
Time of Concentration (min)	13.0	
Clear Peak Flow Rate (cfs)	9.5411	
Burned Peak Flow Rate (cfs)	9.5411	
24-Hr Clear Runoff Volume (ac-ft)	2.0068	
24-Hr Clear Runoff Volume (cu-ft)	87416.8404	
10 Hydrograph (Burbank Hote	I - Proposed: Total)	
8 6 (\$j) MOI 4 2		
0 0 200 400 600 800 Time (minute	1000 1200 1400 1600 es)	

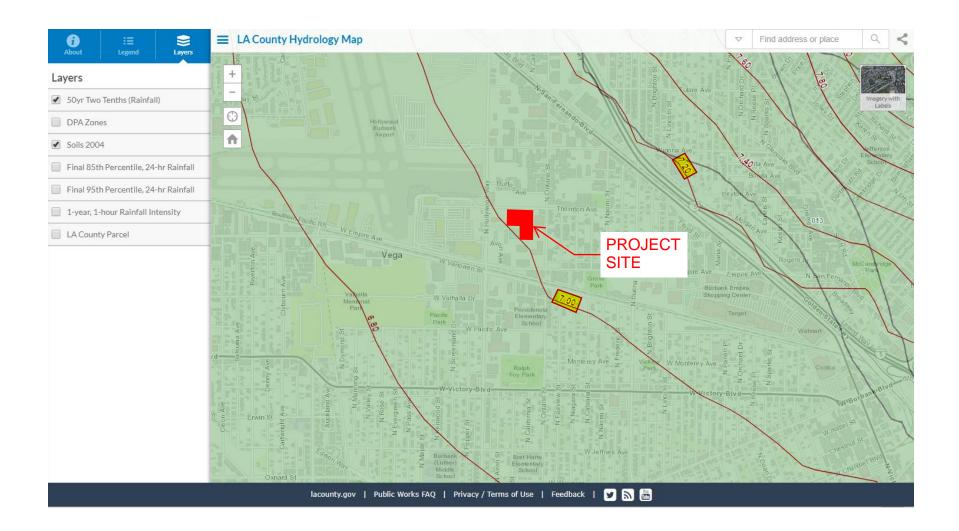
Innut Devenations			
Input Parameters	Durbank Llatel Dranagad		
Project Name Subarea ID	Burbank Hotel - Proposed Total		
Area (ac)	6.17		
	1200.0		
Flow Path Length (ft)	0.02		
Flow Path Slope (vft/hft) 50-yr Rainfall Depth (in)	7.05		
Percent Impervious	0.85		
Soil Type	15		
Design Storm Frequency	25-yr		
Fire Factor	0		
LID	False		
Output Results			
Modeled (25-yr) Rainfall Depth (in)	6.1899		
Peak Intensity (in/hr)	2.5495		
Undeveloped Runoff Coefficient (Cu)	0.3564		
Developed Runoff Coefficient (Cd)	0.8185		
Time of Concentration (min)	11.0		
Clear Peak Flow Rate (cfs)	12.8746		
Burned Peak Flow Rate (cfs)	12.8746		
24-Hr Clear Runoff Volume (ac-ft)	2.4708		
24-Hr Clear Runoff Volume (cu-ft)	107628.3023		
14 Hydrograph (Burbank Ho	otel - Proposed: Total)		
12 - 10 -			
Elow (cfs)	-		
4 -			
0 200 400 600 800 1000 1200 1400 1600 Time (minutes)			

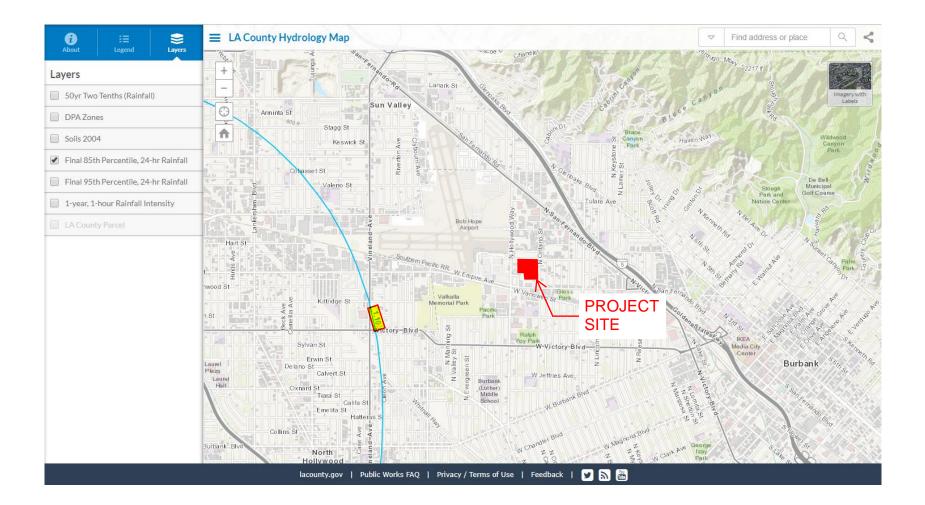
### ATTACHMENT I

## LA COUNTY GIS 85<sup>th</sup> Percentile Map

Fuscoe Engineering, Inc.







## ATTACHMENT J

## LID CALCULATIONS

#### LID AREA SUMMARY TOTAI AREA PERCENT IMPERVIOUS PERVIOUS AREA (ACRES) (ACRES) EXISTING 0.48 6.16 92.18% CONDITIONS PROPOSED 0.94 6.16 84.74% CONDITIONS

File location: F:/Projects/4147/001/Sandbox/Varand/230515 - LID Study/Hyd Version: HydroCalc 1.0.2	roCalc/Burbank Hotel - Existing - Total (85th Percenti	
Input Parameters		
Project Name	Burbank Hotel - Existing	
Subarea ID	Total	
Area (ac)	6.165	
Flow Path Length (ft)	1600.0	
Flow Path Slope (vft/hft) 85th Percentile Rainfall Depth (in)	0.015 1.1	
Percent Impervious	0.9218	
Soil Type	15	
Design Storm Frequency	85th percentile storm	
Fire Factor	0	
LID	True	
Output Results		
-	1.1	
Modeled (85th percentile storm) Rainfall Depth (in) Peak Intensity (in/hr)	0.2337	
Undeveloped Runoff Coefficient (Cu)	0.1	
Developed Runoff Coefficient (Cd)	0.8374	
Time of Concentration (min)	45.0	
Clear Peak Flow Rate (cfs)	1.2064	
Burned Peak Flow Rate (cfs)	1.2064	
24-Hr Clear Runoff Volume (ac-ft) 24-Hr Clear Runoff Volume (cu-ft)	0.4694 20445.2911	
	20770.2011	
1.4 Hydrograph (Burbank Hotel -	Existing: Total)	
1.4		
1.2 -	Λ 1	
1.0 -		
0.8		
<u></u> <del>2</del>		
윤 0.6		
0.4		
0.4 -		
0.2		
0.0		
0 200 400 600 800	1000 1200 1400 1600	
Time (minutes)		

(NOT A PART)

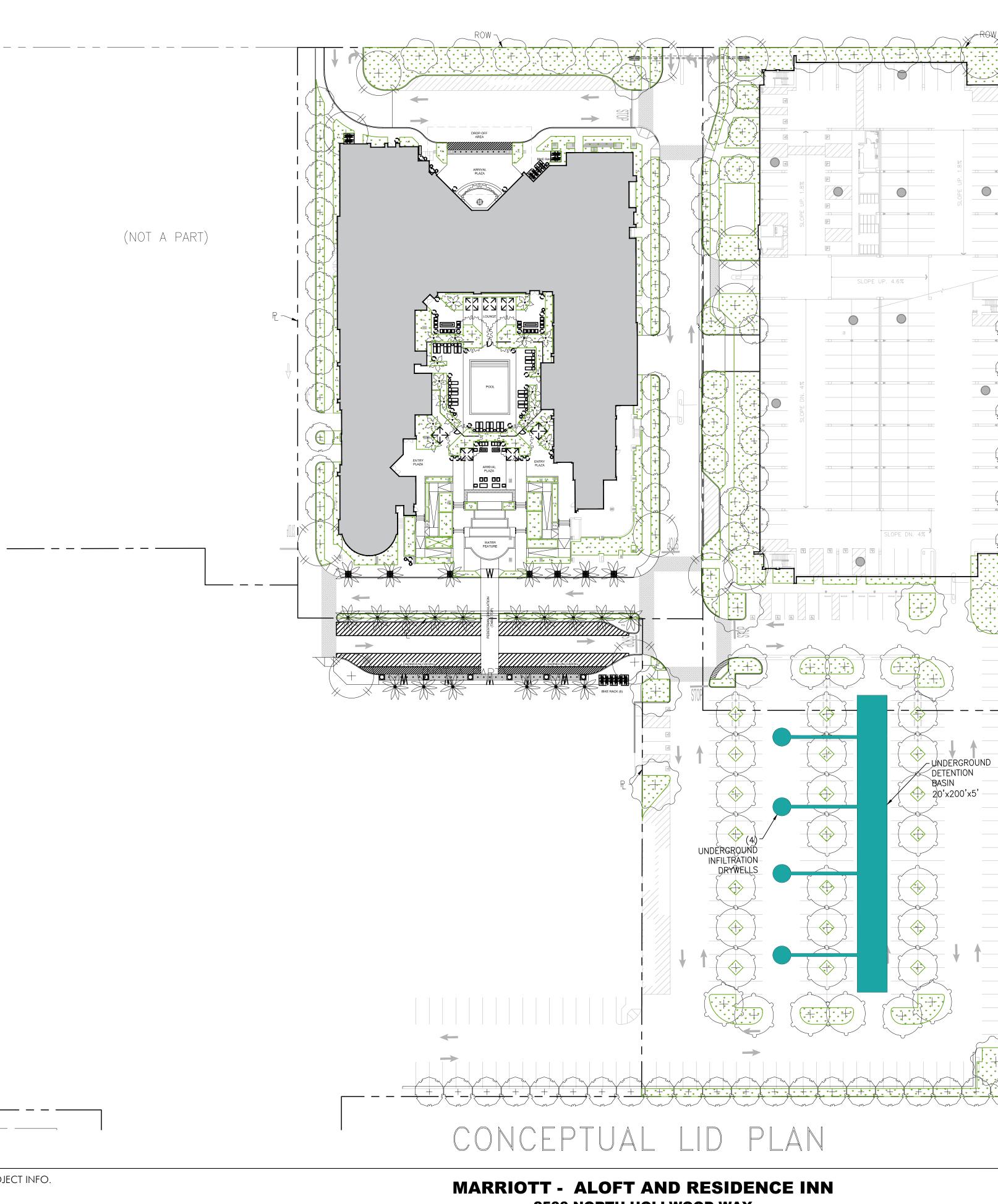
Input Parameters		
Project Name	Burbank Hotel - Proposed	
Subarea ID	Total	
Area (ac)	6.165	
Flow Path Length (ft)	1200.0	
Flow Path Slope (vft/hft)	0.01	
85th Percentile Rainfall Depth (in) Percent Impervious	1.1 0.8474	
Soil Type	15	
Design Storm Frequency	85th percentile storm	
Fire Factor	0	
LID	True	
Output Results		
Modeled (85th percentile storm) Rainfall Depth (i	n) 1.1	
Peak Intensity (in/hr)	0.2414	
Undeveloped Runoff Coefficient (Cu)	0.1	
Developed Runoff Coefficient (Cd)	0.7779	
Time of Concentration (min)	42.0	
Clear Peak Flow Rate (cfs) Burned Peak Flow Rate (cfs)	1.1576 1.1576	
24-Hr Clear Runoff Volume (ac-ft)	0.436	
24-Hr Clear Runoff Volume (cu-ft)	18992.1029	
1.2 Hydrograph (Burbank Hotel	- Proposed: Total)	
1.0 -		
0.8	-	
– 6.0 (cts)		
0.4 -		
0.2		

# ARCHITECTURAL DIMENSIONS

Suite #230 Walnut Creek, CA 94549 TEL. 510.463.8300 • FAX. 510.463.8395

801 Ygnacio Valley Road

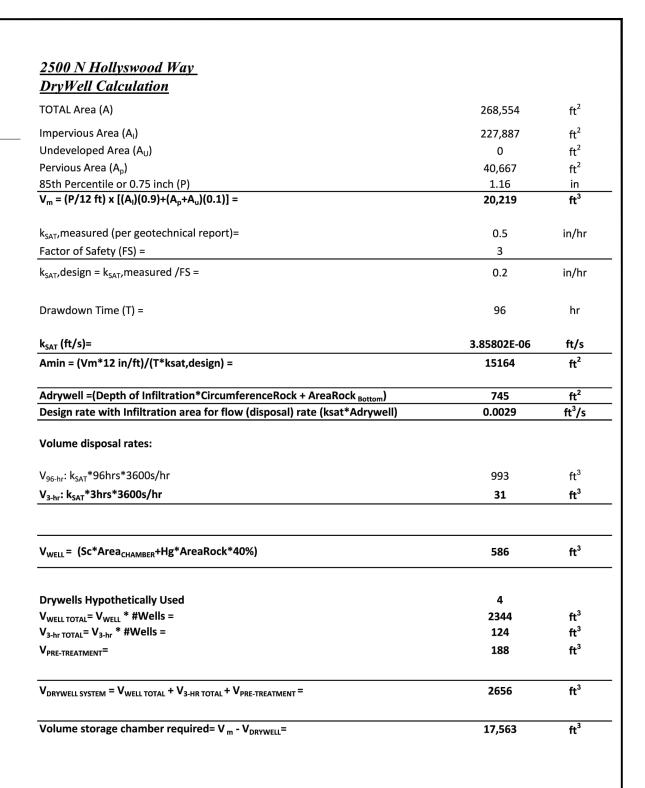
PROJECT INFO.



THORTON AVE.

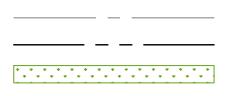
2500 NORTH HOLLWOOD WAY

BURBANK, CA



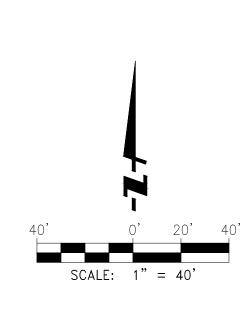
# LEGEND

(NOT A PART)



CENTER LINE PROPERTY LINE / RIGHT OF WAY

PERVIOUS AREA



	SCALE: 1" = 40'
JOB NO. Awh04	DRAWING NO.
DATE.	C2.0

## ATTACHMENT K

### GEOTECHNICAL REPORT

Fuscoe Engineering, Inc.



February 21, 2020 File No. 21947

AWH Partners 1040 Avenue of the Americas 9<sup>th</sup> Floor New York, New York 10018

Attention: Timothy Osiecki

Subject:Preliminary Geotechnical AssessmentProposed Hotel and Parking Structure2500 North Hollywood Way, Burbank, California

Dear Mr. Osiecki:

### 1.0 INTRODUCTION

The purpose and intent of this document is to evaluate the soil and geological site characteristics associated with the proposed development including potential geotechnical issues regarding environmental impacts to the surrounding area, as required by the California Environmental Quality Act (CEQA) Guidelines. This report includes information from geotechnical investigations performed in vicinity of the site, engineering analysis, review of published geologic data, and review of available geotechnical engineering information.

#### 2.0 PROJECT SCOPE

The proposed development consists of the construction of a seven-story hotel structure, which will be located in the western half of the subject site. The hotel structure is anticipated to provide a total of 420 guestrooms and will be constructed at or near existing site grade. In addition, a four-story parking structure is anticipated to be built adjacent to the proposed hotel in the eastern half of the site. The proposed parking structure is anticipated to include double-stacked parking facilities and may include a partially subterranean parking level along the northern perimeter of the site. The proposed development is illustrated on the attached Site Plan included in the Appendix of this report.

Preliminarily, column loads are estimated to be between 800 and 1,000 kips for the hotel structure and 600 to 800 kips for the proposed parking structure. Wall loads are estimated to be between 10 and 20 kips per lineal foot. Grading will consist of excavations between 5 to 20 feet for construction of a certified recompacted fill pad for support of the proposed hotel and possible subterranean parking level for the proposed parking structure. The enclosed Site Plan illustrates the proposed structural features anticipated for the development.

#### 3.0 SITE CONDITIONS

The subject site is located at 2500 North Hollywood Way, in the City of Burbank, California. The property is currently occupied by an existing hotel and a convention center along the southern perimeter of the property. The subject site is located in the northeast region of the property as indicated by the enclosed Site Plan. The area of planned development within the site is currently occupied by a paved parking lot and planter areas.

The site is bounded by Thornton Avenue to the north, by a paved parking lot followed by an existing four-story hospital to the east, by an existing two-story convention center building and paved parking lot to the south, and a paved parking lot followed by a six-story urgent-care building to the west. The site is shown relative to nearby topographic features in the enclosed Vicinity Map and Site Plan.

The topography observed across the site descends to the southeast. There is an estimated elevation difference of approximately 12 feet across the site for an overall site gradient of 35 to 1 (horizontal to vertical).

Vegetation at the site consists of mature trees along the perimeter, and limited amount of bushes and shrubs contained in small landscaped areas and planter boxes. Drainage across the site appears to be by sheetflow to the city streets and toward the southeast.

#### 4.0 <u>RESEARCH - PREVIOUS LOCAL SITE INVESTIGATIONS</u>

This firm has conducted geotechnical engineering investigations in the immediate vicinity of the site as indicated on the enclosed Vicinity Map. The investigations in nearest proximity to the proposed development are summarized below. Pertinent results and observations from these investigations have been incorporated into the preparation of this report. Boring logs from the following site investigations are included in the Appendix of this report.

#### 1. Geotechnologies, Inc., November 9, 2011, Geotechnical Engineering Investigation, Proposed Storage Facility, Northeast Corner of Hollywood Way and Thornton Avenue, Burbank, California, File Number 20195.

Five exploratory excavations were drilled during preparation of this geotechnical investigation report. The excavations ranged in depth from 20 to 50 feet below the existing ground surface within the site. Shallow fill and native alluvial soils were observed below the existing site grade during exploration. Groundwater was not encountered during the subsurface exploration of this site.

#### 2. Geotechnologies, Inc., July 20, 2006, Geotechnical Engineering Investigation, Proposed Commercial Structure, Northwest Corner of Empire Avenue and Avon Street, Burbank, California, File Number 18954.

Four boring excavations were drilled within this site in preparation of the geotechnical engineering investigation. The borings ranged in depth from 50 to 80 feet. Fill material was observed between depths of 2 to 5 feet below ground surface. Native alluvial soils were encountered below the fill to a maximum excavated depth of 80 feet. Groundwater was not observed during the subsurface explorations of this site.

#### 3. Geotechnologies, Inc., January 13, 2005, Geotechnical Engineering Investigation, Proposed Commercial Structures, Northeast Corner of Empire Avenue and Avon Street, Burbank, California, File Number 18771.

The site was explored by excavating two exploratory borings during preparation of the geotechnical engineering investigation. The borings were excavated to a depth of 80 feet. Fill and native alluvial soil was observed during onsite excavation of borings. Groundwater was not encountered during the exploration of this site to a maximum excavated depth of 80 feet.

### 5.0 GROUNDWATER

Review of the Seismic Hazard Zone Report (SHZR) for the Burbank 7<sup>1</sup>/<sub>2</sub>-Minute Quadrangle, (CDMG, 1998, Revised 2006), indicates that the historically highest groundwater level in the vicinity of the site is estimated at 58 feet below ground surface. A copy of this plate is included in the Appendix as Historically Highest Groundwater Levels Map.

Static groundwater was not encountered during exploration of the nearby sites to a maximum explored depth of 80 feet below grade. The locations of nearby site investigations are indicated on the enclosed Vicinity Map.

Groundwater Monitoring Stations -

The State of California Department of Water Resources lists a groundwater monitoring well approximately 0.8 miles southwest of the site. The well location is indicated on the enclosed Groundwater Station Map and the well data logs are also enclosed in the Appendix. The well readings are summarized in the following table:

GROUNDWATER MONITORING WELL SUMMARY			
Well Station	Ground Surface Elevation	Highest Rec. Water Surface Elevation	Lowest Rec. Water Surface Elevation
341864N1183612W001	661.4 feet	559.8 feet on 4/1/1952	428.8 feet on 9/17/1968

#### Geotechnologies, Inc.

Due to the proximity of the monitoring well to the subject site and the uniform geologic conditions within the region, it is the opinion of this firm that the data readings are representative of the groundwater levels underlying the site. The highest recorded water elevation corresponds to approximately 115 feet below the ground surface at the subject site. Based on these considerations, it is the opinion of this firm that the historic high-water level indicated in the Seismic Hazard Zone Report (CDMG, 1998, Revised 2006) is a conservative estimate of historic high and future water levels anticipated within the site.

### 6.0 <u>REGIONAL GEOLOGIC SETTINGS</u>

The subject property is located in the Transverse Ranges Geomorphic Province. The Transverse Ranges are characterized by roughly east-west trending mountains and the northern and southern boundaries are formed by reverse fault scarps. The convergent deformational features of the Transverse Ranges are a result of north-south shortening due to plate tectonics. This has resulted in local folding and uplift of the mountains along with the propagation of thrust faults (including blind thrusts). The intervening valleys have been filled with sediments derived from the bordering mountains.

### 7.0 LOCAL GEOLOGY

Review of the geologic map indicates the subject site is located in an area underlain by alluvial sediments. This geologic characterization is consistent with the earth materials encountered on previous geotechnical investigations conducted within the vicinity of the subject site. Copies of the Local Geologic Map (Dibblee) and Regional Geologic Maps are enclosed herein.

### 8.0 SEISMIC AND GEOLOGIC HAZARDS

a) <u>Regional Faulting</u>

Based on criteria established by the California Division of Mines and Geology (CDMG) now called California Geologic Survey (CGS), faults may be categorized as active, potentially active, or inactive. Active faults are those which show evidence of surface displacement within the last 11,000 years (Holocene-age). Potentially-active faults are those that show evidence of most recent surface displacement within the last 1.6 million years (Quaternary-age). Faults showing no evidence of surface displacement within the last 1.6 million years are considered inactive for most purposes, with the exception of design of some critical structures.

Buried thrust faults are faults without a surface expression but are a significant source of seismic activity. They are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the Southern California area. Due to the buried nature of these thrust faults, their existence is usually not known until they produce an earthquake. The risk for surface rupture potential of these buried thrust faults is inferred to be low (Leighton, 1990). However, the seismic risk of these buried structures in terms of recurrence and maximum potential magnitude is not well established.



#### Geotechnologies, Inc.

Therefore, the potential for surface rupture on these surface-verging splays at magnitudes higher than 6.0 cannot be precluded.

A list of faults located within 60 miles (100 kilometers) from the project site has been provided in the enclosed table entitled Seismic Source Summary Table. This table is based on information provided by the United States Geologic Survey (USGS) 2008 National Seismic Hazard Maps–Source Parameters database. The distances provided in the enclosed table are measured from a point selected near the center of the subject site. A Southern California Fault Map has also been enclosed for reference. The following sections describe regional active faults of interest, potentially active faults, blind thrust faults and unnamed faults:

#### i) <u>Active Faults</u>

#### Verdugo Fault

The Verdugo fault runs along the southwest edge of the Verdugo Mountains and is located approximately 1.4 miles to the northeast of the site. According to Weber, et.-al., (1980) 2 to 3-meter-high scarps were identified in alluvial fan deposits in the Burbank and Glendale areas. Further to the northwest, in Sun Valley, a fault was reportedly identified at a depth of 40 feet in a sand and gravel pit. Although considered active by the County of Los Angeles, Department of Public Works (Leighton, 1990), and the United States Geological Survey, the fault is not designated with an earthquake fault zone by the California Geological Survey. It is estimated that the Verdugo fault is capable of producing a maximum 6.9 magnitude earthquake.

#### Sierra Madre Fault System

The Sierra Madre fault alone forms the southern tectonic boundary of the San Gabriel Mountains in the northern San Fernando Valley. It consists of a system of faults approximately 75 miles in length. The individual segments of the Sierra Madre fault system range up to 16 miles in length and display a reverse sense of displacement and dip to the north. The most recently active portions of the zone include the Mission Hills, Sylmar and Lakeview segments, which produced an earthquake in 1971 of magnitude 6.4. Tectonic rupture along the Lakeview Segment during the San Fernando Earthquake of 1971 produced displacements of approximately 2<sup>1</sup>/<sub>2</sub> to 4 feet upward and southwestward.

It is believed that the Sierra Madre fault zone is capable of producing an earthquake of magnitude 7.3. The closest trace of the fault is located approximately 5.7 miles to the east of the subject site.

#### Hollywood Fault

The Hollywood fault is part of the Transverse Ranges Southern Boundary fault system. The Hollywood fault is located approximately 6.0 miles south of site. This fault trends east-west along the base of the Santa Monica Mountains from the West Beverly Hills Lineament in the West Hollywood–Beverly Hills area to the Los Feliz area of Los Angeles. The Hollywood fault is the eastern segment of the reverse oblique Santa Monica–Hollywood fault. Based on geomorphic evidence, stratigraphic correlation between exploratory borings, and fault trenching studies, this fault is classified as active.

Until recently, the approximately 9.3-mile long Hollywood fault was considered to be expressed as a series of linear ground-surface geomorphic expressions and south-facing ridges along the south margin of the eastern Santa Monica Mountains and the Hollywood Hills. Multiple recent fault rupture hazard investigations have shown that the Hollywood fault is located south of the ridges and bedrock outcroppings along portions of Sunset Boulevard. The Hollywood fault has not produced any damaging earthquakes during the historical period and has had relatively minor micro-seismic activity. It is estimated that the Hollywood fault is capable of producing a maximum 6.7 magnitude earthquake. In 2014, the California Geological Survey established an Earthquake Fault Zone for the Hollywood Fault.

#### Raymond Fault

The Raymond fault is located approximately 8.7 miles southeast of the subject site. Much of the geomorphic evidence for the Raymond fault has been obscured by urbanization of the San Gabriel Valley. However, a discontinuous escarpment can be traced from Monrovia to the Arroyo Seco in South Pasadena. The very bold, "knife edge" escarpment in Monrovia parallel to Scenic Drive is believed to be a fault scarp of the Raymond fault. Trenching of the Raymond fault is reported to have revealed Holocene movement (Weaver and Dolan, 1997). The Raymond fault has been found to be an effective groundwater barrier which divides the San Gabriel Valley into groundwater sub-basins.

The recurrence interval for the Raymond fault is probably slightly less than 3,000 years, with the most recent documented event occurring approximately 1,600 years ago (Crook, et al, 1978). However, historical accounts of an earthquake that occurred in July 1855 as reported by Toppozada and others, 1981, place the epicenter of a Richter Magnitude 6 earthquake within the Raymond fault. It is believed that the Raymond fault is capable of producing a 6.8 magnitude earthquake. The Raymond Fault is considered active by the California Geological Survey.

#### Whittier-Elsinore Fault System

The Whittier fault is located approximately 19 miles southeast of the site. The Whittier fault together with the Chino fault comprises the northernmost extension of the northwest trending Elsinore fault system. The mapped surface of the Whittier fault extends in a west-northwest direction for a distance of 20 miles from the Santa Ana River to the terminus of the Puente Hills. The Whittier fault is essentially a strike-slip, northeast dipping fault zone which also exhibits evidence of reverse movement along with en echelon fault segments, en echelon folds and anatomizing (braided) fault segments. Right lateral offsets of stream drainages of up to 8800 feet (Durham and Yerkes, 1964) and vertical separation of the basement complex of 6,000 to 12,000 feet (Yerkes, 1972), have been documented. It is believed that the Whittier fault is capable of producing a 7.8 magnitude earthquake.

The Whittier Narrows earthquakes of October 1, 1987, and October 4, 1987, occurred in the area between the westernmost terminus of the mapped trace of the Whittier fault and the frontal fault system. The main 5.9 magnitude shock of October 1, 1987 was not caused by slip on the Whittier fault. The quake ruptured a gently dipping thrust fault with an east-west strike (Haukson, Jones, Davis and others, 1988). In contrast, the earthquake of October 4, 1987, is assumed to have occurred on the Whittier fault as focal mechanisms show mostly strike-slip movement with a small reverse component on a steeply dipping northwest striking plane (Haukson, Jones, Davis and others, 1988).

#### San Gabriel Fault System

The San Gabriel fault system is located approximately 9.3 miles north of the subject site. The San Gabriel fault system comprises a series of subparallel, steeply north-dipping faults trending approximately north 40 degrees west with a right-lateral sense of displacement. There is also a small component of vertical dip-slip separation. The fault system exhibits a strong topographic expression and extends approximately 90 miles from San Antonio Canyon on the southeast to Frazier Mountain on the northwest. The estimated right lateral displacement on the fault varies from 34 miles (Crowell, 1982) to 40 miles (Ehlig, 1986), to 10 miles (Weber, 1982). Most scholars accept the larger displacement values and place the majority of activity between the Late Miocene and Late Pliocene Epochs of the Tertiary Era (65 to 1.8 million years before present).

Portions of the San Gabriel fault system are considered active by California Geological Survey. Recent seismic exploration in the Valencia area (Cotton and others, 1983; Cotton, 1985) has established Holocene offset. Radiocarbon data acquired by Cotton (1985) indicate that faulting in the Valencia area occurred between 3,500 and 1,500 years before present.

It is hypothesized by Ehlig (1986) and Stitt (1986) that the Holocene offset on the San Gabriel fault system is due to sympathetic (passive) movement as a result of north-south compression of the upper Santa Susana thrust sheet. Seismic evidence indicates that the San Gabriel fault system is truncated at depth by the younger, north-dipping Santa Susana-Sierra Madre faults (Oakeshott, 1975; Namson and Davis, 1988).

#### Newport-Inglewood Fault System

The Newport-Inglewood fault zone is a broad zone of discontinuous north to northwestern echelon faults and northwest to west trending folds. The closest fault segment of this fault system to the subject site is located about 10.7 miles to the southwest. The fault zone extends southeastward from West Los Angeles, across the Los Angeles Basin, to Newport Beach and possibly offshore beyond San Diego (Barrows, 1974; Weber, 1982; Ziony, 1985).

The onshore segment of the Newport-Inglewood fault zone extends for about 37 miles from the Santa Ana River to the Santa Monica Mountains. Here it is overridden by, or merges with, the east-west trending Santa Monica zone of reverse faults.

The surface expression of the Newport-Inglewood fault zone is made up of a strikingly linear alignment of domal hills and mesas that rise on the order of 400 feet above the surrounding plains. From the northern end to its southernmost onshore expression, the Newport-Inglewood fault zone is made up of: Cheviot Hills, Baldwin Hills, Rosecrans Hills, Dominguez Hills, Signal Hill-Reservoir Hill, Alamitos Heights, Landing Hill, Bolsa Chica Mesa, Huntington Beach Mesa, and Newport Mesa. Several single and multiple fault strands, arranged in a roughly left stepping en echelon arrangement, make up the fault zone and account for the uplifted mesas.

The most significant earthquake associated with the Newport-Inglewood fault system was the Long Beach earthquake of 1933 with a magnitude of 6.3 on the Richter scale. It is believed that the Newport-Inglewood fault zone is capable of producing a 7.5 magnitude earthquake.

#### Santa Susana Fault

The Santa Susana fault extends approximately 17 miles west-northwest from the northwest edge of the San Fernando Valley into Ventura County and is at the surface high on the south flank of the Santa Susana Mountains. The fault ends near the point where it overrides the south-side-up South strand of the Oak Ridge fault. The Santa Susana fault strikes northeast at the Fernando lateral ramp and turns east at the northern margin of the Sylmar Basin to become the Sierra Madre fault. This fault is exposed near the base of the San Gabriel Mountains for approximately 46



miles from the San Fernando Pass at the Fernando lateral ramp east to its intersection with the San Antonio Canyon fault in the eastern San Gabriel Mountains, east of which the range front is formed by the Cucamonga fault. The Santa Susana fault has not experienced any recent major ruptures except for a slight rupture during the 6.5 magnitude 1971 Sylmar earthquake. The Santa Susana Fault is considered to be active by the County of Los Angeles. It is believed that the Santa Susana fault has the potential to produce a 6.9 magnitude earthquake. The closest trace of the fault is located approximately 12.4 miles northwest of the site.

#### Malibu Coast Fault

The Malibu Coast fault is part of the Transverse Ranges Southern Boundary fault system, a west-trending system of reverse, oblique-slip, and strike-slip faults that extends for more than approximately 124 miles along the southern edge of the Transverse Ranges and includes the Hollywood, Raymond, Anacapa–Dume, Malibu Coast, Santa Cruz Island, and Santa Rosa Island faults.

The Malibu Coast fault zone runs in an east-west orientation onshore subparallel to and along the shoreline for a linear distance of about 17 miles through the Malibu City limits, but also extends offshore to the east and west for a total length of approximately 37.5 miles. The onshore Malibu Coast fault zone involves a broad, wide zone of faulting and shearing as much as one mile in width. While the Malibu Coast Fault Zone has not been officially designated as an active fault zone by the State of California and no Special Studies Zones have been delineated along any part of the fault zone under the Alquist-Priolo Act of 1972, evidence for Holocene activity (movement in the last 11,000 years) has been established in several locations along individual fault splays within the fault zone. Due to such evidence, several fault splays within the onshore portion of the fault zone are identified as active.

Large historic earthquakes along the Malibu Coast fault include the 1979, 5.2 magnitude earthquake and the 1989, 5.0 magnitude earthquake. The Malibu Coast fault zone is approximately 15.3 miles to the southwest of the site. This fault is believed to be capable of producing a maximum 7.0 magnitude earthquake.

#### Palos Verdes Fault

Studies indicate that there are several active on-shore extensions of the strike-slip Palos Verdes fault, which is located approximately 19.6 miles southwest of site. Geophysical data also indicate the off-shore extensions of the fault are active, offsetting Holocene age deposits. No historic large magnitude earthquakes are associated with this fault. However, the fault is considered active by the California Geological Survey. It is estimated that the Palos Verdes fault is capable of producing a maximum 7.7 magnitude earthquake.

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#### San Andreas Fault System

The San Andreas Fault system forms a major plate tectonic boundary along the western portion of North America. The system is predominantly a series of northwest trending faults characterized by a predominant right lateral sense of movement. At its closest point the San Andreas Fault system is located approximately 27.9 miles to the northeast of the site.

The San Andreas and associated faults have had a long history of inferred and historic earthquakes. Cumulative displacement along the system exceeds 150 miles in the past 25 million years (Jahns, 1973). Large historic earthquakes have occurred at Fort Tejon in 1857, at Point Reyes in 1906, and at Loma Prieta in 1989. Based on single-event rupture length, the maximum Richter magnitude earthquake is expected to be approximately 8.25 (Allen, 1968). The recurrence interval for large earthquakes on the southern portion of the fault system is on the order of 100 to 200 years.

#### ii) Potentially Active Faults

#### Santa Monica Fault

The Santa Monica fault, located approximately 6.8 miles to the southwest of the site, is also part of the Transverse Ranges Southern Boundary fault system. The Santa Monica fault extends east from the coastline in Pacific Palisades through Santa Monica and West Los Angeles and merges with the Hollywood fault at the West Beverly Hills Lineament in Beverly Hills where its strike is northeast. It is believed that at least six surface ruptures have occurred in the past 50 thousand years. In addition, a well-documented surface rupture occurred between 10 and 17 thousand years ago, although a more recent earthquake probably occurred 1 to 3 thousand years. It is thought that the Santa Monica fault system may produce earthquakes with a maximum magnitude of 7.4.

#### Anacapa-Dume Fault

The Anacapa–Dume fault, located approximately 16.8 miles southwest of the subject site, is a near-vertical offshore escarpment exceeding 600 meters locally, with a total length exceeding 62 miles. This fault is also part of the Transverse Ranges Southern Boundary fault system. It occurs as close as 3.6 miles offshore south of Malibu at its western end, but trends northeast where it merges with the offshore segments of the Santa Monica Fault Zone. It is believed that the Anacapa–Dume fault is responsible for generating the historic 1930 magnitude 5.2 Santa Monica earthquake, the 1973 magnitude 5.3 Point Mugu earthquake, and the 1979 and 1989 Malibu earthquakes, each of which possessed a magnitude of 5.0. The



Anacapa–Dume fault is thought to be capable of producing a maximum magnitude 7.2 earthquake.

#### iii) Blind Thrusts Faults and Unnamed Faults

Blind or buried thrust faults are faults without a surface expression but are a significant source of seismic activity. By definition, these faults have no surface trace, therefore the potential for ground surface rupture is considered remote. They are typically broadly defined based on the analysis of seismic wave recordings of hundreds of small and large earthquakes in the Southern California area. Due to the buried nature of these thrust faults, their existence is sometimes not known until they produce an earthquake. Two blind thrust faults in the Los Angeles metropolitan area are the Puente Hills blind thrust and the Elysian Park blind thrust. Another blind thrust fault of note is the Northridge fault located in the northwestern portion of the San Fernando Valley.

The Elysian Park anticline is thought to overlie the Elysian Park blind thrust. This fault has been estimated to cause an earthquake every 500 to 1,300 years in the magnitude range 6.2 to 6.7. The Elysian Park thrust fault is located approximately 6.3 miles to the southeast of the site.

The Puente Hills blind thrust fault extends eastward from Downtown Los Angeles to the City of Brea in northern Orange County. The Puente Hills blind thrust fault includes three north-dipping segments, named from east to west as the Coyote Hills segment, the Santa Fe Springs segment, and the Los Angeles segment. These segments are overlain by folds expressed at the surface as the Coyote Hills, Santa Fe Springs Anticline, and the Montebello Hills. The closest segment of the Puente Hills Blind Thrust is located approximately 11.1 miles to the southeast of the site.

The Santa Fe Springs segment of the Puente Hills blind thrust fault is believed to be the cause of the October 1, 1987, Whittier Narrows Earthquake. The epicenter of this seismic event is located approximately 20 miles southeast of the subject site. Based on deformation of late Quaternary age sediments above this fault system and the occurrence of the Whittier Narrows earthquake, the Puente Hills blind thrust fault is considered an active fault capable of generating future earthquakes beneath the Los Angeles Basin. A maximum moment magnitude of 7.0 is estimated by researchers for the Puente Hills blind thrust fault.

The Mw 6.7 Northridge earthquake was caused by the sudden rupture of a previously unknown, blind thrust fault. This fault has since been named the Northridge Thrust; however, it is also known in some of the literature as the Pico Thrust. It has been assigned a maximum magnitude of 6.9 and a 1,500 to 1,800-year recurrence interval. The Northridge thrust is located 8.2 miles to the northwest of the site.

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#### b) Local Faulting

Local faults including quaternary and pre-quaternary faults are illustrated in relation to the site on the attached "Local Fault Map". The Raymond fault, located approximately 8.7 miles southeast of the site, contributes significantly to the historic seismic activity of the localized region as exemplified by the Pasadena earthquake of 1988 (discussed below). The Northridge fault is located 8.1 miles to the west of the site as indicated on the "Local Fault Map". The Northridge fault specifically has demonstrated recent activity within the region and is credited with the Northridge Earthquake of 1994. Unnamed quaternary and pre-quaternary faults lie to the southeast of the site as indicated on the attached fault map. The nearest projected fault is identified as the Verdugo fault and is located approximately 1.4 miles northeast of the site.

#### c) <u>Significant Seismic Events (>4.0 Magnitude)</u>

Significant seismic event earthquakes (>4.0 Mag) for the greater Los Angeles area (for incident dates later than 1933) are indicated on the attached map entitled "Historical Seismic Event Map – Regional". Seismic events in close proximity to the site are indicated on the "Historical Seismic Event Map – Local". Historical earthquake events in close proximity to the site are discussed as follows:

#### Northridge Earthquake -

The Northridge earthquake event took place on January 17, 1994 at 4:30 am on a blind thrust fault directly beneath the urban developed area of the San Fernando Valley within the City of Los Angeles. Significant and widespread damage was incurred by the Northridge event including: Section collapse of major freeways, office buildings, parking structures, and residential structures. Due to the high acceleration in both vertical and horizontal direction, some structures were lifted from their foundations.

Building code revisions and earthquake mitigation policies were initiated in response to the Northridge earthquake. Due to the significant vertical accelerations, design methodologies were re-evaluated to account for vertical as well as lateral earthquake accelerations. In addition, the City of Los Angeles and adjacent unincorporated regions recently require seismic retrofit of soft-story residential structures, in part, due to lessons learned from the Northridge seismic event.

#### San Fernando Earthquake -

Also known as the Sylmar Earthquake, the San Fernando Earthquake took place on February 9, 1971 at 6:01 am. The earthquake was centered along the San Fernando thrust fault and exhibited surface rupture roughly 12 miles in length and a maximum slip of up to 6 feet. The San Fernando Earthquake caused approximately 500 million in property damage and 65 fatalities - primarily as a result of the partial collapse of the Veteran's Administration Hospital.



In response to the San Fernando Earthquake, building codes were strengthened. In addition, the Alquist-Priolo Special Studies Zone Act was passed in 1972 which prohibits structures designed for human occupancy to be positioned in close proximity to active fault traces.

#### Whittier Narrows Earthquake -

The Whittier Narrows earthquakes of October 1, 1987, and October 4, 1987, occurred in the area between the westernmost terminus of the mapped trace of the Whittier fault and the frontal fault system in a previously unknown thrust fault approximately 20 km east of downtown Los Angeles as indicated by the "Historical Seismic Event Map – Local". The main 5.9 magnitude shock of October 1, 1987 was not caused by slip on the Whittier fault. The quake ruptured a gently dipping thrust fault with an east-west strike (Haukson, Jones, Davis and others, 1988). In contrast, the earthquake of October 4, 1987, is assumed to have occurred on the Whittier fault as focal mechanisms show mostly strike-slip movement with a small reverse component on a steeply dipping northwest striking plane (Haukson, Jones, Davis and others, 1988).

The most significant structural damage was concentrated in the uptown district of Whitter, the old downtown section of Alhambra and the regions of Pasadena that include older structures. Unreinforced masonry structures and structures which exhibit "soft-story" design sustained the most severe damage during the Whittier Narrows seismic event.

#### Pasadena Earthquake -

The Pasadena earthquake of December 3, 1988 has an established epicenter to the southeast of the site as indicated by the attached "Historic Seismic Event Map – Local". The earthquake was followed by an unusually small number of aftershocks. The Pasadena event of 1988 was determined to be associated with the Raymond fault and provided a clear example of left-lateral movement along the fault. The Montebello earthquake of 1989 is considered to be a potential aftershock of the Pasadena earthquake.

#### Montebello Earthquake -

The Montebello earthquake of June 12, 1989 was measured as a magnitude 4.9 event and was located just east of downtown Los Angeles and southeast of the site. The event was followed 25 minutes later by a magnitude 4.4 aftershock. The earthquake originated from a depth of 15.6 km, similar to the depth of the Pasadena earthquake which occurred six months earlier. As previously stated, it is considered by many that the Montebello earthquake is likely to be an aftershock of the Pasadena earthquake.

#### d) <u>Surface Ground Rupture</u>

In 1972, the Alquist-Priolo Special Studies Zones Act (now known as the Alquist-Priolo Earthquake Fault Zoning Act) was passed into law. The Act defines "active" and



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"potentially active" faults utilizing the same aging criteria as that used by California Geological Survey (CGS). However, established state policy has been to zone only those faults which have direct evidence of movement within the last 11,000 years. It is this recency of fault movement that the CGS considers as a characteristic for faults that have a relatively high potential for ground rupture in the future.

Surface rupture is defined as surface displacement which occurs along the surface trace of the causative fault during an earthquake. Based on review of the Earthquake Fault Zones Burbank Quadrangle, the site is not located within an earthquake fault zone. A copy of Earthquake Fault Zone Map may be found in the Appendix of this report.

#### e) <u>Seismicity</u>

Continual seismic activity is expected to occur within the immediate and general region of the site. The seismic conditions identified in this document and referenced reports are typical of sites within this area of Burbank and Los Angeles County, and of a type that are routinely addressed through regulatory measures. Design of the proposed development in accordance with the provisions of the applicable California Building Code will be required to mitigate the potential effects of strong ground shaking.

#### f) Deaggregated Seismic Source Parameters

The peak ground acceleration (PGA<sub>M</sub>) and modal magnitude for the site was obtained from the USGS Probabilistic Seismic Hazard Deaggregation program and Structural Engineers Association of California & the Office of Statewide Health Planning and Development (OSHPD, 2020). The parameters are based on a 2 percent in 50 years ground motion (2475year return period). A shear wave velocity (Vs30) of 259 meters per second was utilized in the computation. The USGS Seismic Hazard and OSHPD utility programs indicate a PGA<sub>M</sub> of 0.9g and a modal magnitude of 6.69 for the site.

#### g) ASCE 7-16 / 2019 California Building Code Seismic Parameters

Based on information derived from nearby subsurface investigations, the subject site is classified as Site Class D, which corresponds to a "Stiff Soil" Profile, according to Table 20.3-1 of ASCE 7-16. This information and the site coordinates were input into the Structural Engineers Association of California & OSHPD seismic utility program in order to calculate ground motion parameters for the site:

CALIFORNIA BUILDING CODE SEISMIC PARAMET	ERS
California Building Code	2019
ASCE Design Standard	7-16
Risk Category	II
Site Class	D
Mapped Spectral Acceleration at Short Periods (S <sub>S</sub> )	1.990g
Site Coefficient (Fa)	1.0
Maximum Considered Earthquake Spectral Response for Short Periods $(S_{MS})$	1.990g
Five-Percent Damped Design Spectral Response Acceleration at Short Periods $(S_{DS})$	1.327g
Mapped Spectral Acceleration at One-Second Period (S1)	0.666g
Site Coefficient (F <sub>v</sub> )	1.7*
Maximum Considered Earthquake Spectral Response for One-Second Period $(S_{M1})$	1.132g*
Five-Percent Damped Design Spectral Response Acceleration for One-Second Period (S <sub>D1</sub> )	0.755g*

\* According to ASCE 7-16, a Long Period Site Coefficient  $(F_v)$  of 1.7 may be utilized provided that the value of the Seismic Response Coefficient  $(C_s)$  is determined by Equation 12.8-2 for values of  $T \le 1.5T_s$  and taken as equal to 1.5 times the value computed in accordance with either Equation 12.8-3 for  $T_L \ge T > 1.5T_s$  or equation 12.8-4 for  $T > T_L$ . Alternatively, a site-specific ground motion hazard analysis may be performed in accordance with ASCE 7-16 Section 21.1 and/or a ground motion hazard analysis in accordance with ASCE 7-16 Section 21.2 to determine ground motions for any structure.

# h) <u>Liquefaction</u>

Liquefaction is a phenomenon in which saturated silty to cohesionless soils below the groundwater table are subject to a temporary loss of strength due to the buildup of excess pore pressure during cyclic loading conditions such as those induced by an earthquake. Liquefaction-related effects include loss of bearing strength, amplified ground oscillations, lateral spreading, and flow failures.

Based on review of the Seismic Hazards Maps of the State of California (CDMG, 1999), the site is not located within an area designated as potentially liquefiable. This determination is based on groundwater depth records, soil type and distance to a fault capable of producing a substantial earthquake. A copy of this map is included in the Appendix.



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The investigations in nearest proximity to the proposed development submitted by this firm concluded that the possibility of liquefaction was considered to be remote within the sites explored. Nonetheless, a site-specific liquefaction assessment including site excavation, laboratory testing and analysis is recommended to determine the susceptibility of liquefaction of onsite soils.

## i) Dynamic Settlement

Seismically-induced settlement or compaction of dry or moist, cohesionless soils can be an effect related to earthquake ground motion. Such settlements are typically most damaging when the settlements are differential in nature across the length of structures.

Some seismically-induced settlement of the proposed structures should be expected as a result of strong ground-shaking, however, due to the uniform nature of the underlying geologic materials observed in nearby site investigations, excessive differential settlements are not expected to occur.

## j) <u>Regional Subsidence</u>

The site is not located within a zone of known subsidence due to oil or other fluid withdrawal.

# k) Landsliding

The probability of seismically-induced landslides occurring on the site is considered to be negligible due to the general lack of substantive elevation difference across or adjacent to the site. Therefore, potential impacts related to landsliding would be less than significant.

# 1) <u>Collapsible Soils</u>

Based on previous geotechnical investigations conducted within the near vicinity of the site, the soils underlying the area would not be considered prone to hydroconsolidation.

#### m) Expansive Soils

The geologic materials previously tested by this firm for nearby sites indicate a very low expansion potential for near-surface onsite soils. Accordingly, the geologic materials are anticipated to be in the very low to low expansion range within the subject site. Special design considerations for mitigation of highly expansive soils will not likely be required. Design of the proposed structures in accordance with the California Building Code is anticipated to fully mitigate the potential effects of moderately expansive soils.



#### n) Tsunamis, Seiches and Flooding

Tsunamis are large ocean waves generated by sudden water displacement caused by a submarine earthquake, landslide, or volcanic eruption. The site is high enough and far enough from the ocean to preclude being prone to hazards of a tsunami.

Review of the County of Los Angeles Flood and Inundation Hazards Map (Leighton, 1990), indicates the site lies within an inundation boundary due to a seiche or a breached upgradient reservoir.

Review of the Flood Insurance Rate Map established by the Federal Emergency Management Agency (FEMA) indicates the site lies within an area of minimal flood hazard. A copy of this map is enclosed in the Appendix of this report.

## o) <u>Oil Fields and Oil Wells</u>

Based on review of the Division of Oil, Gas, and Geothermal Resources, DOGGR Online Mapping system, http://maps.conservation.ca.gov/doms/doms-app.html, the site is not located within the limits of an oil field. No evidence of an oil or gas well has been drilled within the site. The closest oil well in proximity to the site is approximately 1.9 miles to the west and is identified as API No. 0403705527. The operator of record is listed as B. J. Jeffrey and the well status is designated as "Idle". A copy of the Oil Field & Oil Well Location Map is included in the Appendix of this report.

#### p) <u>Methane Zone</u>

Based on research of available documentation, the site does not appear to be located within a methane hazard zone as designated by state and county information resources. According to the County of Los Angeles Methane Research Tool, Department of Public Works, Los Angeles County, Methane Mitigation Website: https://dpw.lacounty.gov/epd /swims/OnlineServices/search-methane-hazards-esri.aspx, the site is not located within 300 feet of an oil or gas well or 1,000 feet of a methane producing site.

#### q) <u>Temporary Excavations</u>

All required excavations are expected to be sloped, or properly shored, in accordance with the provisions of the applicable building code. Accordingly, the project would not result in any on-site or off-site landslide. Excavations on the order of 20 feet in depth within the site are anticipated during construction of the proposed parking structure. Shoring systems, if required, may include soldier piles with rakers and/or tiebacks or trench shoring utilizing a cross-braced design. Should tiebacks be required, components of the tieback anchor would likely extend below adjacent properties and public right of ways. Appropriate notifications and agreements should be obtained by the development team prior to tieback installations.

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#### r) <u>Septic Tanks</u>

It is the understanding of this firm that infrastructure and facilities are available at the site for wastewater disposal. No septic tanks or alternative disposal systems are necessary or anticipated for the proposed site project.

## s) Ground Failure

The proposed construction is not anticipated to cause or increase the potential for any seismic related ground failure on the project site or adjacent sites. The project site is not located within an Earthquake Fault Zone, or a Seismically Induced Landslide Zone. The proposed structures and any required shoring system shall be designed in accordance with the City of Burbank and California Building Codes and shall mitigate the potential effects of ground failure.

## t) <u>Erosion</u>

The project would not result in substantial off-site soil erosion or the loss of topsoil due to the paved nature of the surrounding sites, and the lack of elevation difference slope geometry across or adjacent to the site. In addition, earthwork activities associated with the grading and export of soil would occur in accordance with the city requirements as specified in the Burbank Building Code and through the grading plan review and approval process. Grading and erosion control measures shall be implemented during site grading to reduce erosion impacts as part of the regulatory requirements.

#### u) Landform Alterations

There are no significant hills, canyons, ravines, outcrops or other geologic or topographic features on the site. Therefore, any proposed project would not adversely affect any prominent geologic or topographic features.

# 9.0 PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

Based upon nearby geotechnical site exploration, laboratory testing, and research, it is the preliminary finding of Geotechnologies, Inc. that development of the site, as described here, is considered feasible from a geotechnical engineering standpoint. This report is preliminary in nature because it is based on information obtained from nearby projects.

A site-specific subsurface geotechnical exploration program, with laboratory testing and engineering analyses, should be prosecuted in order to generate a geotechnical engineering investigation for the project site. The comprehensive geotechnical report with design parameters and recommendations should be submitted to the local governing agency for review prior to construction. The proposed development shall be designed and constructed in accordance with the provisions of the most current applicable building code and requirements of the local building official.



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The project site is not located within an earthquake fault zone, or a seismically-induced landslide zone. The site is not located within an area identified as potentially liquefiable. The conditions identified in this report are typical of sites within this area of Los Angeles County, and of a type that are routinely addressed through regulatory measures.

Excavations on the order of 5 to 20 feet in depth will be required for the foundation elements and anticipated elevator pit enclosures for the proposed hotel and parking structure. The excavations are expected to remove the existing fill soils and expose the underlying dense native soils. Preliminarily, it is anticipated that the proposed hotel may be supported on conventional spread footings and/or mat foundation bearing in a certified recompacted fill pad. The parking structure may be supported by conventional foundation bearing in competent undisturbed alluvial soils anticipated at the bottom of the proposed excavation.

As with all of Southern California, the site is subject to potential strong ground motion should a moderate to strong earthquake occur on a local or regional fault. Design of the project in accordance with the provisions of the applicable California Building Code will be required to mitigate the potential effects of strong ground shaking.

## **Stormwater Infiltration**

Compliance to LID requirements and the City of Burbank guidelines regarding stormwater management within the site is viable based on existing development plans and favorable geologic conditions encountered on nearby sites. Stormwater infiltration into onsite soils will likely be feasible based on preliminary geologic assessment. Onsite percolation testing and evaluation will be necessary to determine actual infiltration performance including site specific design values.

# 10.0 CLOSURE

This report is general in nature and does not present specific geotechnical design criteria sufficient for use during design phase of the development. A comprehensive geotechnical investigation including subsurface exploration and laboratory testing should be prepared for design input, when necessary.

Geotechnologies, Inc. appreciates the opportunity to provide our services on this project. Should you have any questions, please contact this office.



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Enclosures:	References Vicinity Map Site Plan Local Geologic Map Regional Geologic Map Historically Highest Groundwater Levels Seismic Source Summary Table Southern California Fault Map Local Fault Map Historical Seismic Event Map – Regional Historical Seismic Event Map – Local Earthquake Fault Zone Map Flood Insurance Rate Map Oil Field & Oil Well Location Map Seismic Hazard Zone Map Groundwater Well Station Data (13 pages) Boring from Previous Investigation, dated November 9, 2011, Job No. 20195 (6 pages) Borings from Previous Investigation, dated July 20, 2006, Job No. 18954 (10 pages) Borings from Previous Investigation, dated January 13, 2005, Job No. 18771 (6 pages)
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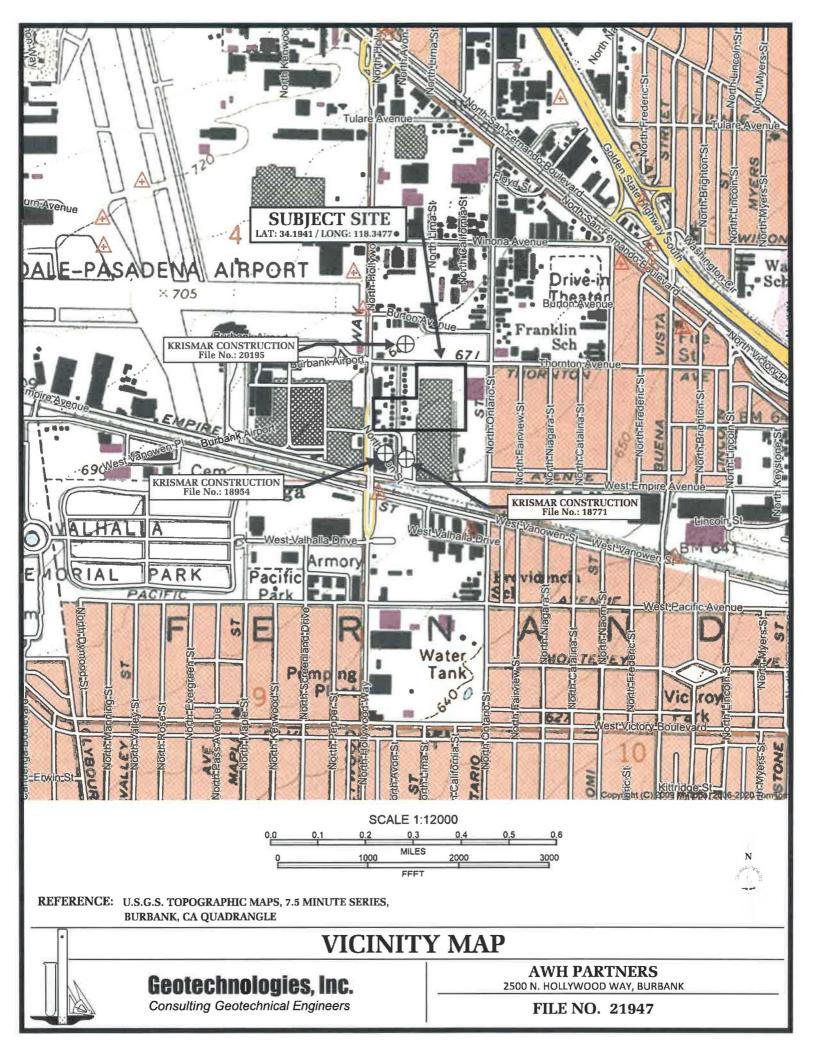
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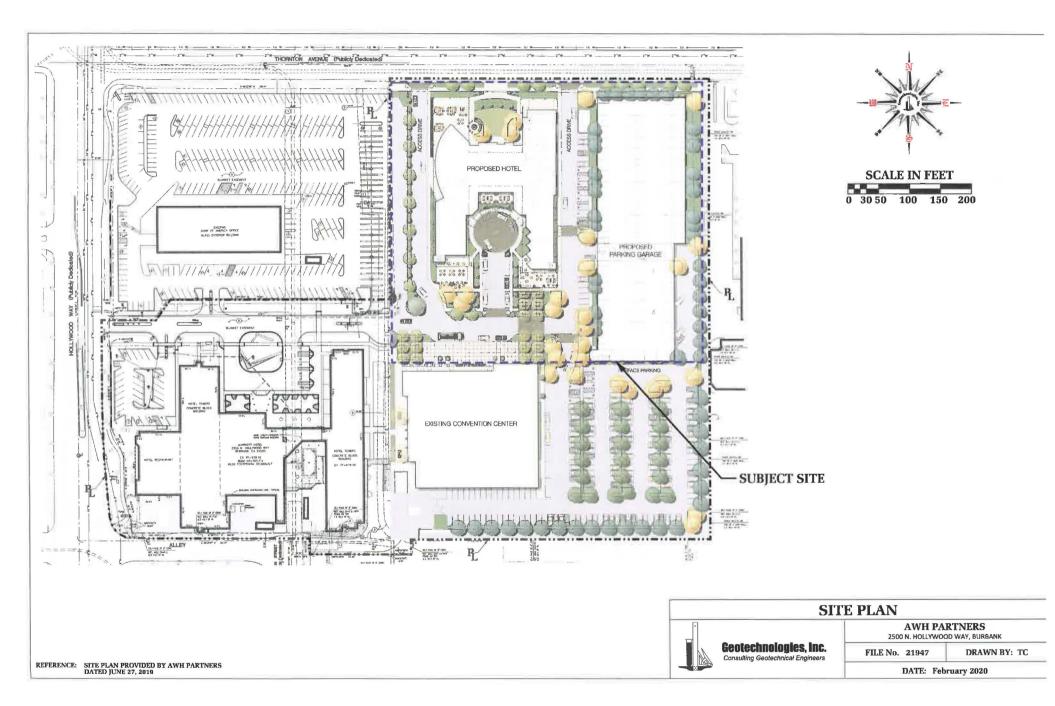
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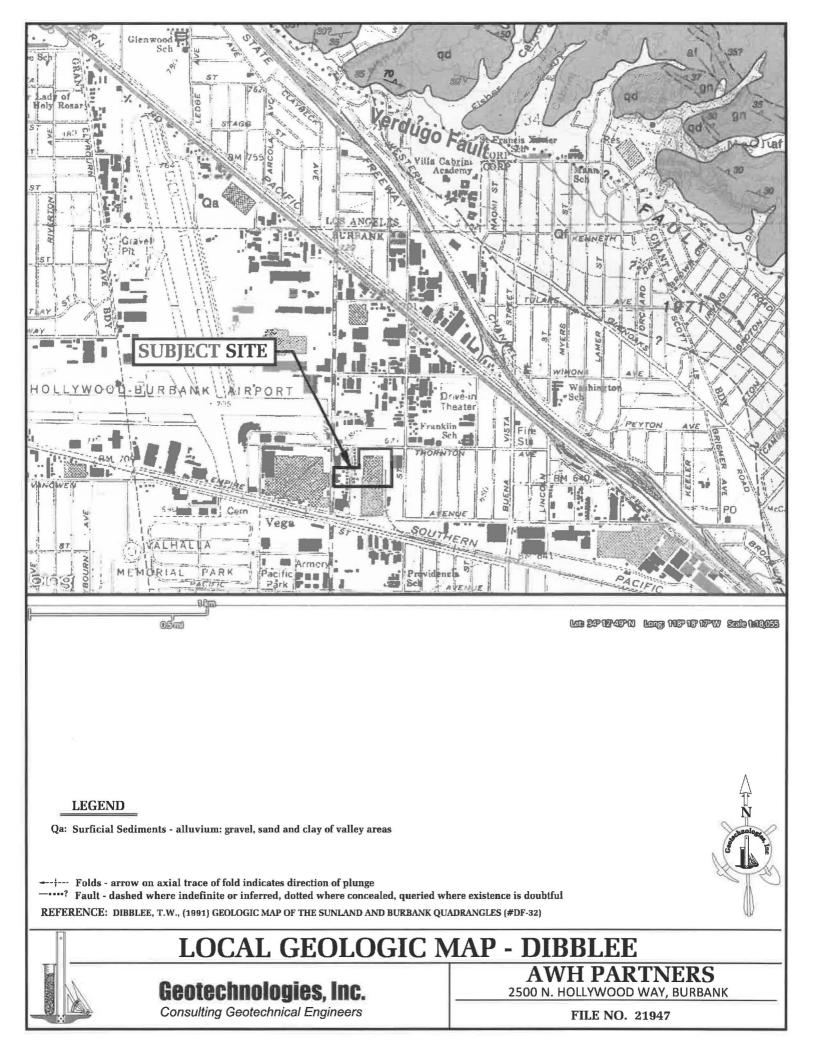


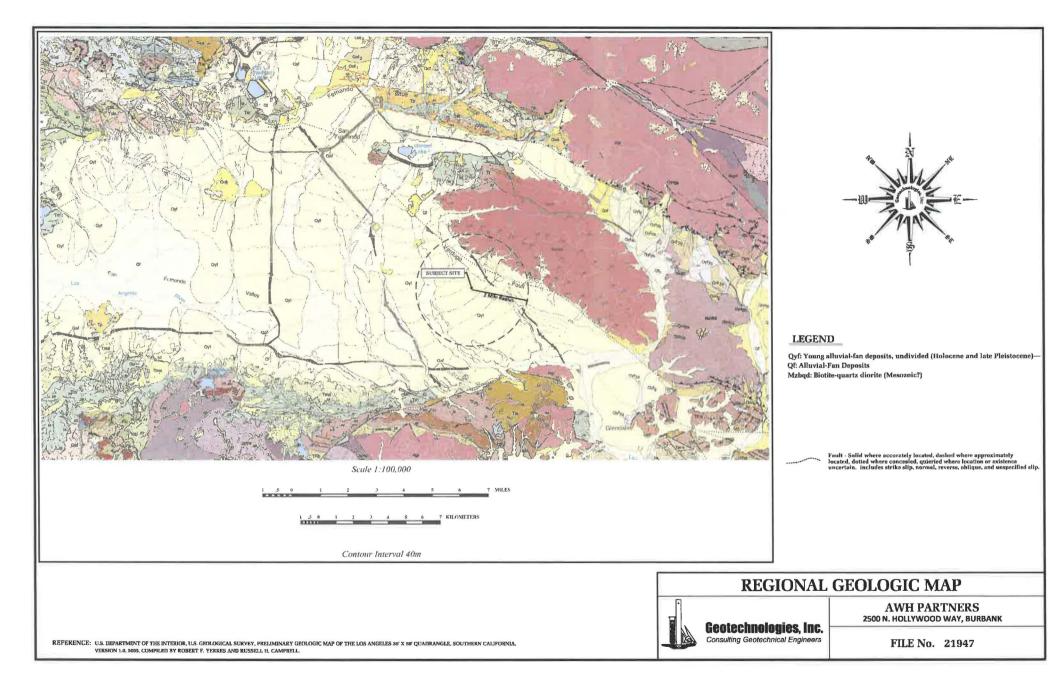
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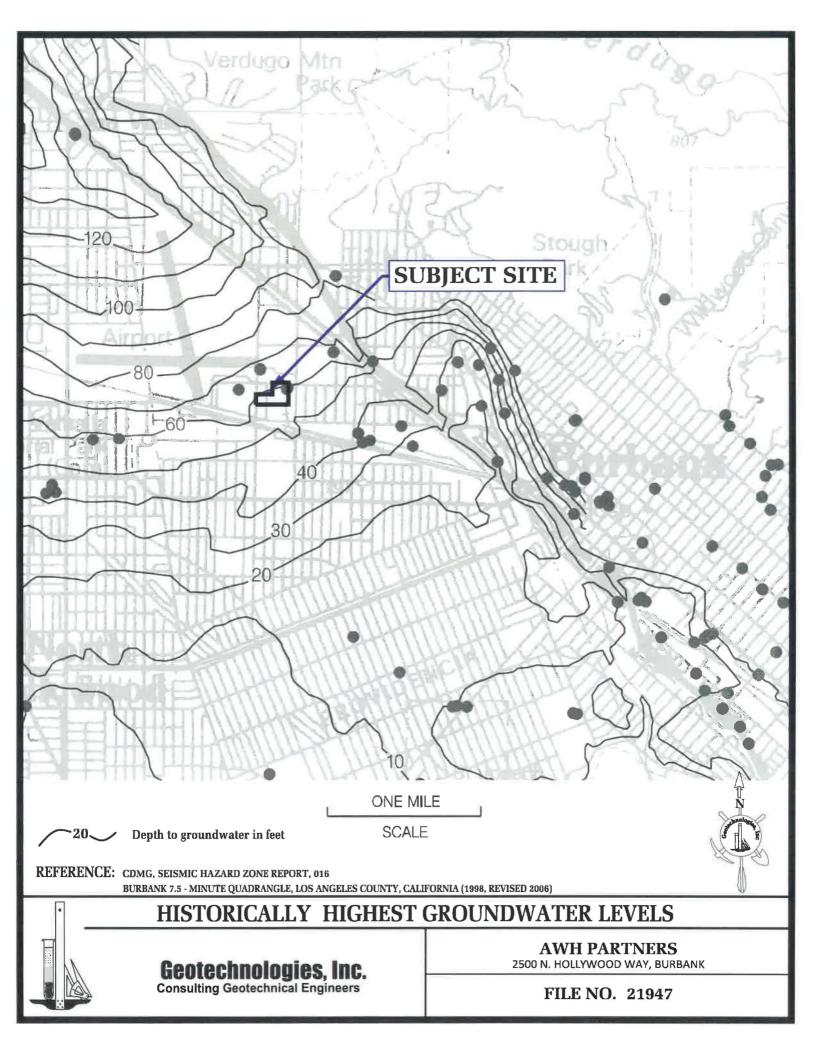
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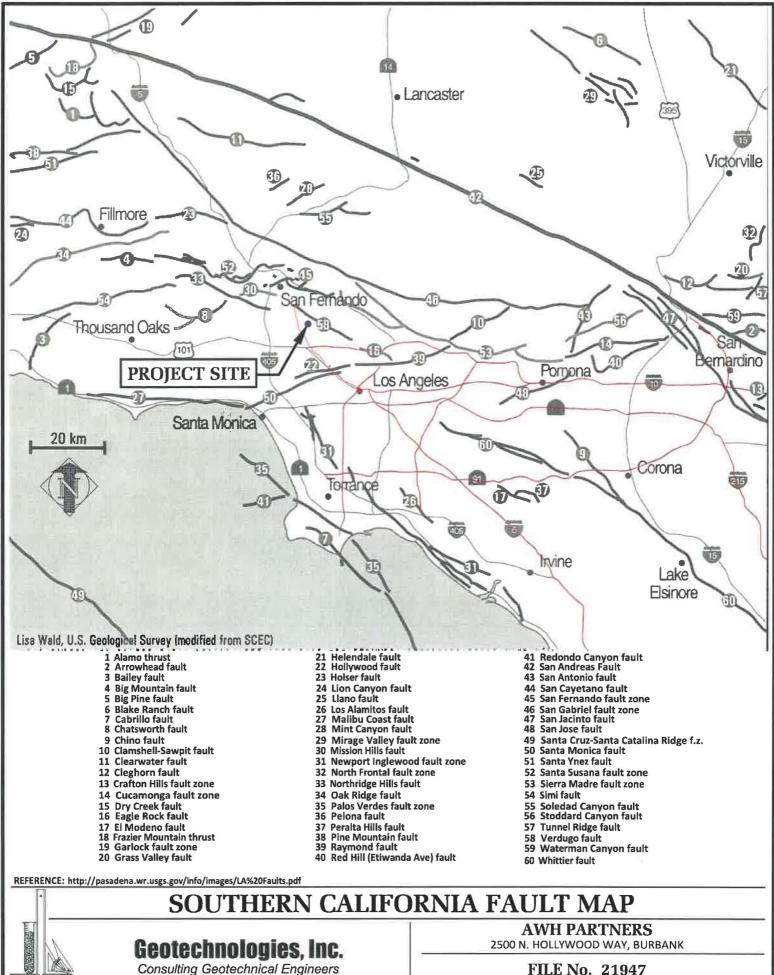


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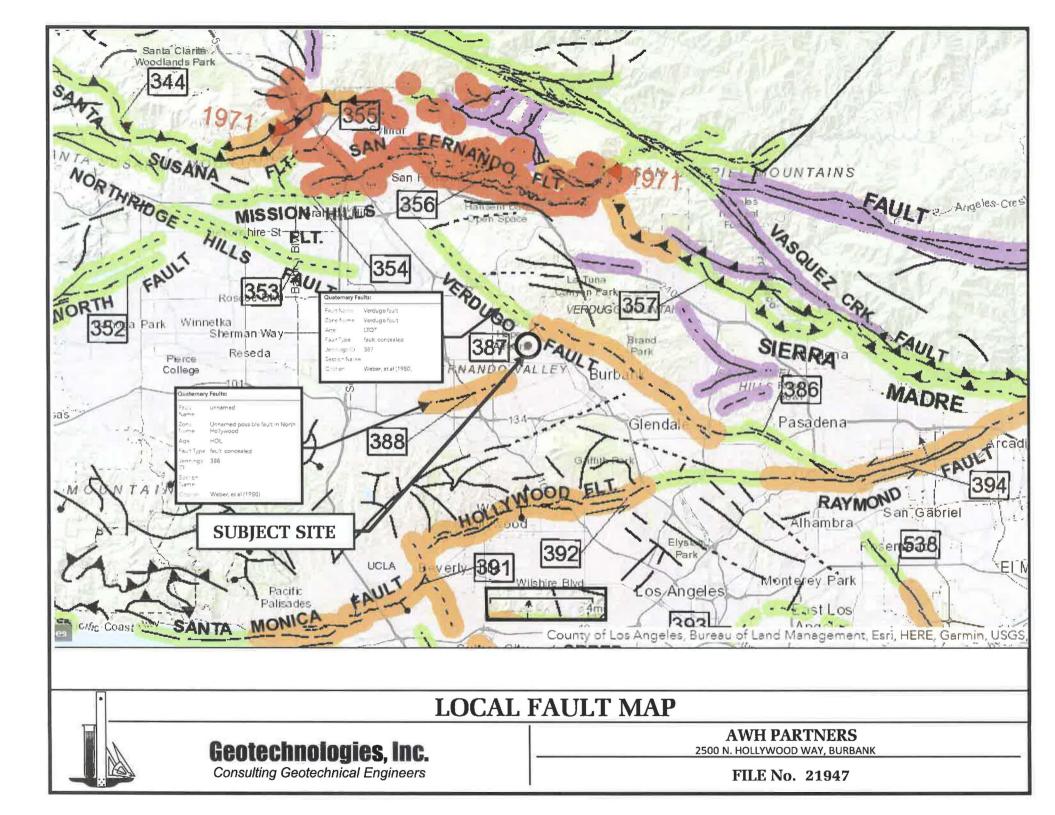
Name	Distance in Miles	Pref Slip Rate (mm/yr)	Dip (deg)	Dip Dir	Slip Sense	Rupture Top (km)	Rupture Bottom (km)	Length (km)	Mag*
Verdugo	1.41	0.5	55	NE	reverse	0	15	29	6.9
Sierra Madre (San Fernando)	5.75	2	45	Ν	thrust	0	13	18	6.7
Sierra Madre	5.88	2	53	Ν	reverse	0	14	57	7.2
Hollywood	6.01	1	70	N	strike slip	0	17	17	6.7
Elysian Park (Upper)	6.30	1.3	50	NE	reverse	3	15	20	6.7
Santa Monica Connected	6.78	2.4	44		strike slip	0.8	11	93	7.4
Northridge	8.17	1.5	35	S	thrust	7.4	17	33	6.9
Raymond	8.67	1.5	79	N	strike slip	0	16	22	6.8
San Gabriel	9.35	1	61	N	strike slip	0	15	71	7.3
Newport-Inglewood	10.68	1	88		strike slip	0	15	65	7.2
Puente Hills (LA)	11.14	0.7	27	Ν	thrust	2.1	15	22	7.0
Santa Susana	12.37	5	55	Ν	reverse	0	16	27	6.9
Malibu Coast	15.31	0.3	74	Ν	strike slip	0	16	38	7.0
Anacapa-Dume	16.79	3	41	Ν	thrust	1.2	12	65	7.2
Holser	19.22	0.4	58	S	reverse	0	19	20	6.8
Palos Verdes	19.58	3	90	V	strike slip	0	14	99	7.3
Clamshell-Sawpit	19.95	0.5	50	NW	reverse	0	14	16	6.7
Simi-Santa Rosa	21.37	1	60		strike slip	1	12	39	6.9
Elsinore	21.95	n/a	81	NE	strike slip	0	14	83	7.3
Puente Hills (Santa Fe Springs)	23.12	0.7	29	Ν	thrust	2.8	15	11	6.7
Anacapa-Dume	24.70	3	45	Ν	thrust	0	16	51	7.2
Oak Ridge Connected	25.69	3.6	53		reverse	0.6	15	94	7.4
Puente Hills (Coyote Hills)	27.09	0.7	26	Ν	thrust	2.8	15	17	6.9
S. San Andreas	27.94	n/a	90	V	strike slip	0	14	279	7.8
San Jose	28.87	0.5	74	NW	strike slip	0	15	20	6.7
San Cayetano	29.02	6	42	Ν	thrust	0	16	42	7.2
Cucamonga	35.73	5	45	N	thrust	0	8	28	6.7
Chino	36.21	1	65	SW	strike slip	0	14	29	6.8
Santa Ynez (East)	41.66	2	70	S	strike slip	0	13	68	7.2
San Joaquin Hills	41.81	0.5	23	SW	thrust	2	13	27	7.1
San Jacinto	45.27	n/a	90	V	strike slip	0	17	181	7.7
Pitas Point Connected	46.60	1	55		reverse	1.2	13	78	7.3
Ventura-Pitas Point	46.60	1	64	Ν	reverse	1	15	44	7.0
Mission Ridge-Arroyo Parida-Santa Ana	50.54	0.4	70	S	reverse	0	8	69	6.9
Cleghorn	51.15	3	90	V	strike slip	0	16	25	6.8
Garlock	52.70	n/a	90	V	strike slip	0.4	12	210	7.6
Channel Islands Thrust	53.79	1.5	20	Ν	thrust	5	12	59	7.3
Santa Cruz Island	54.36	1	90	V	strike slip	0	13	69	7.2
Red Mountain	55.68	2	56	Ν	reverse	0	14	101	7.4
Pleito	59.41	2	46	S	reverse	0	14	44	7.1

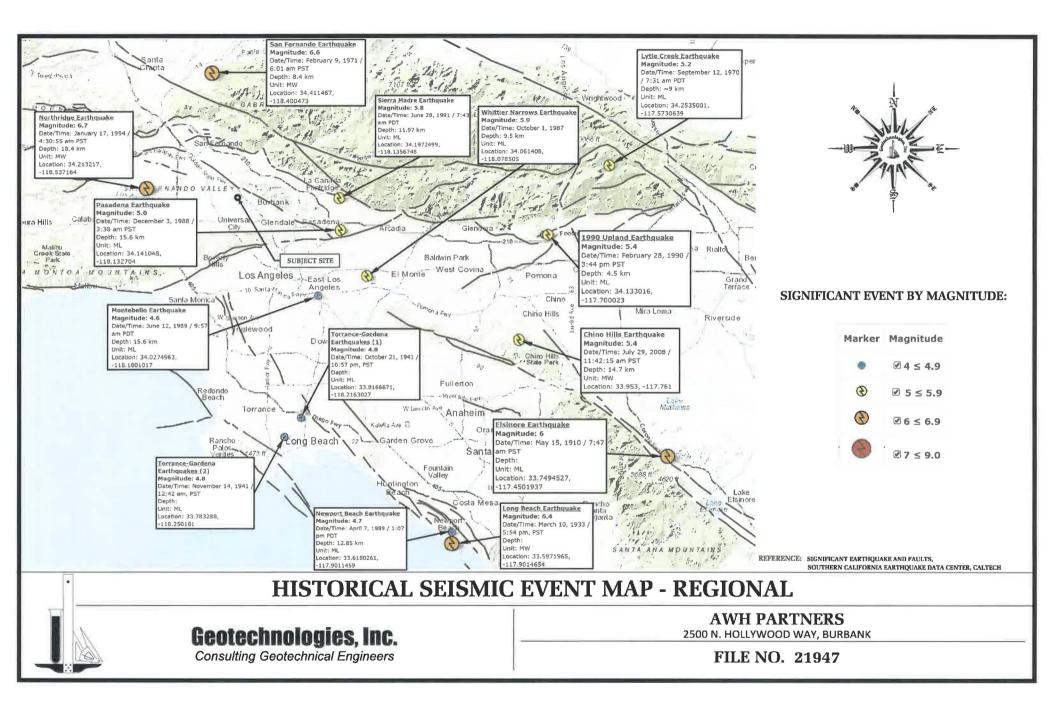
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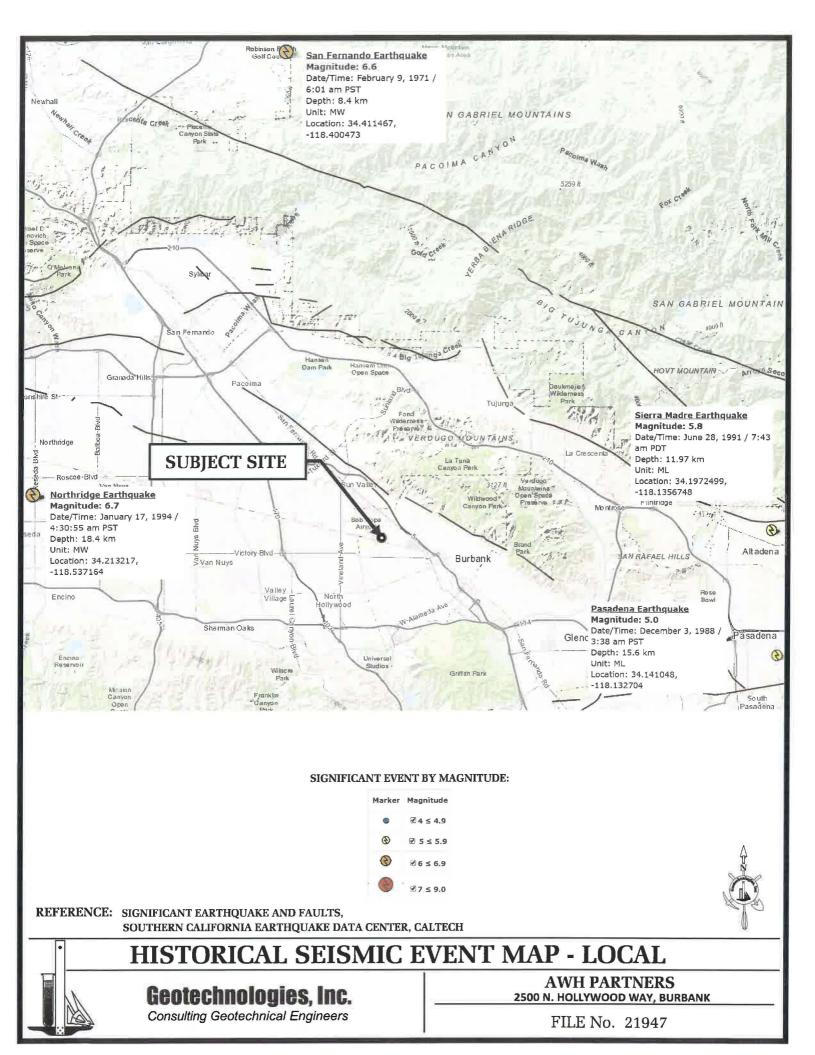
\*Maximum Magnitude - Ellsworth

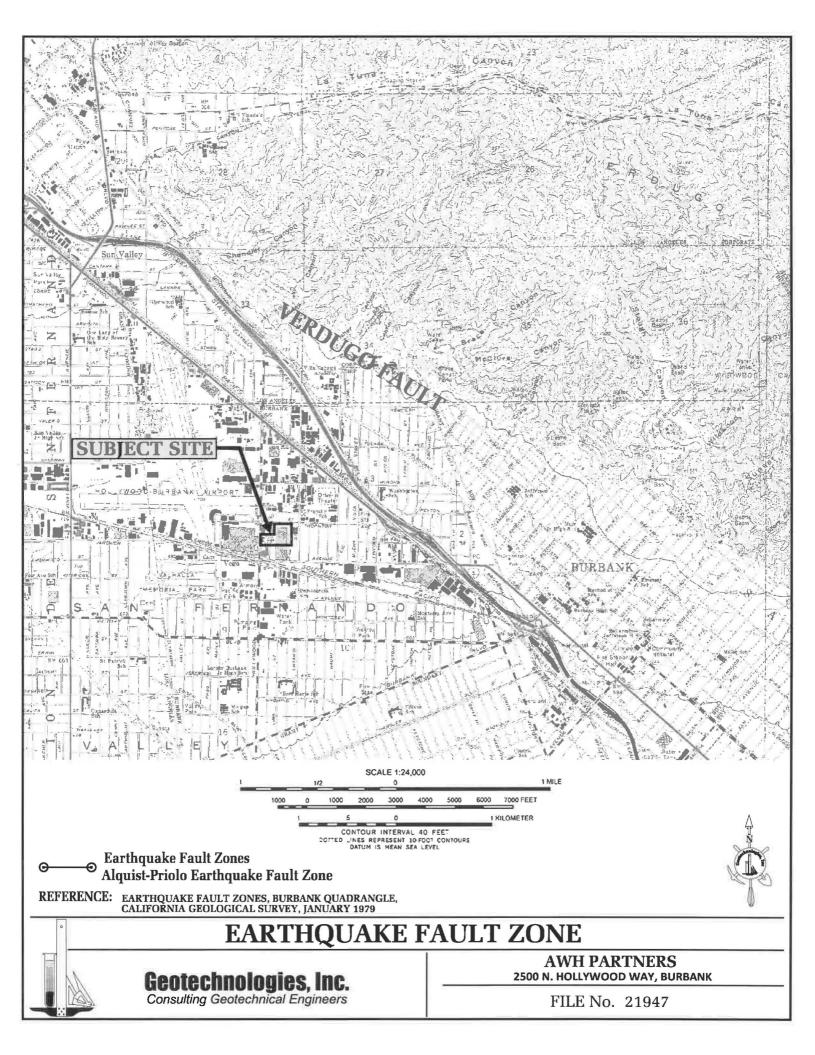


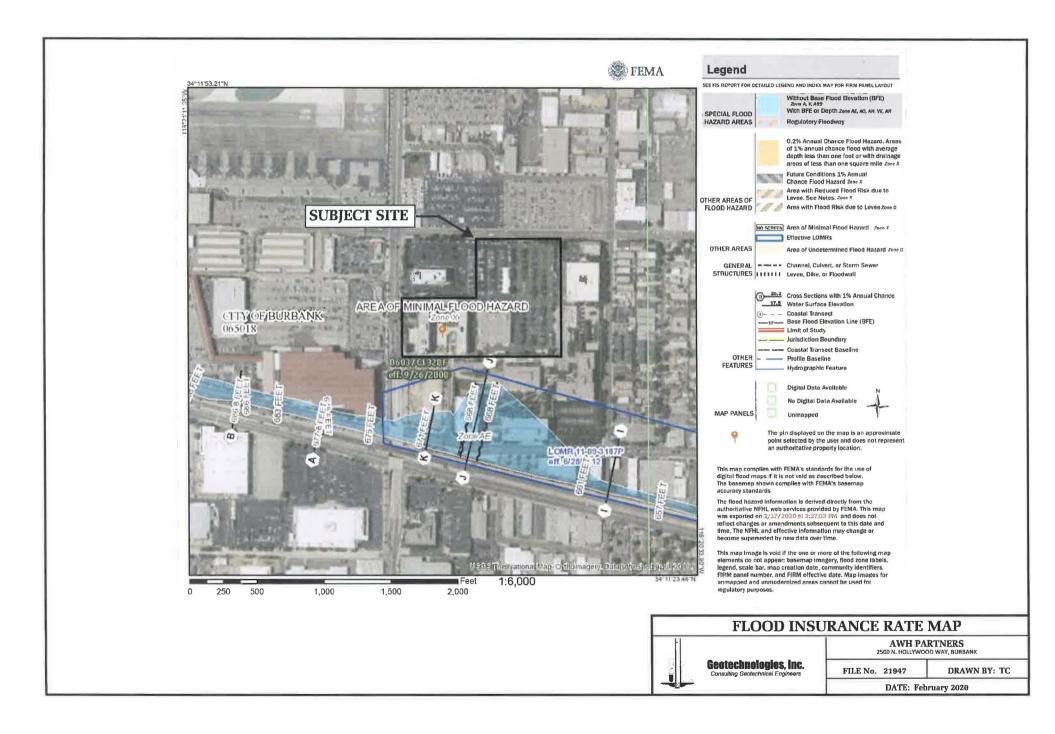
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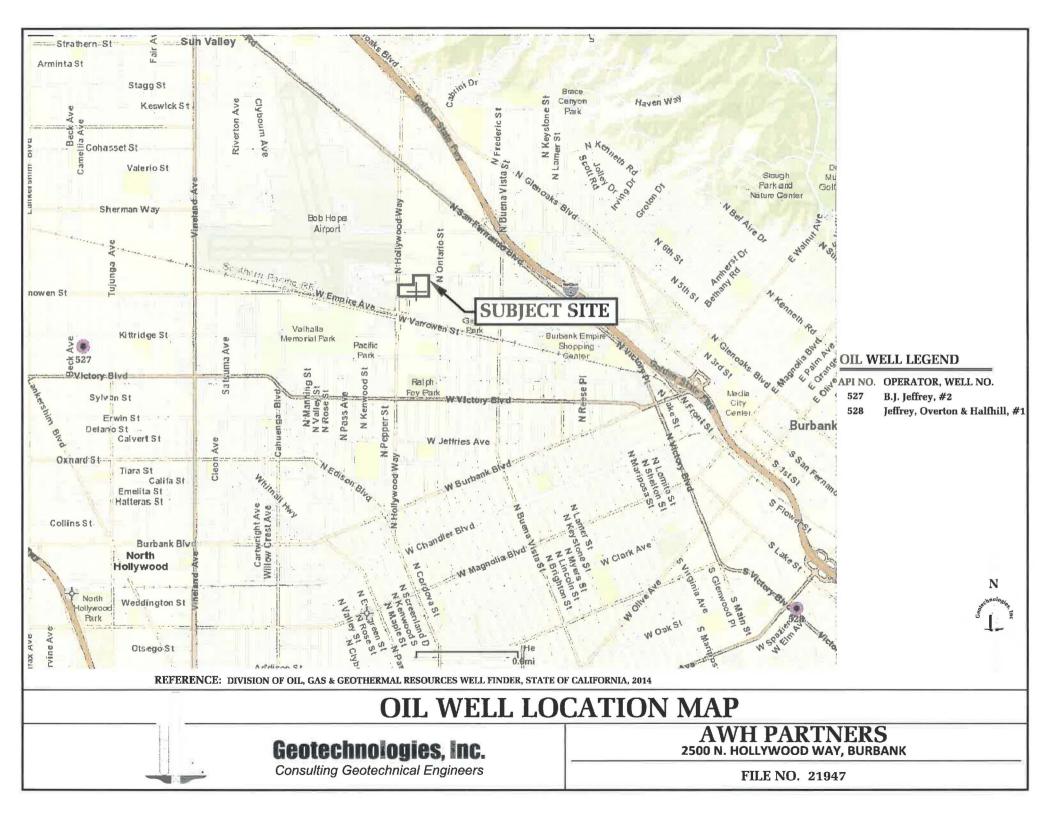


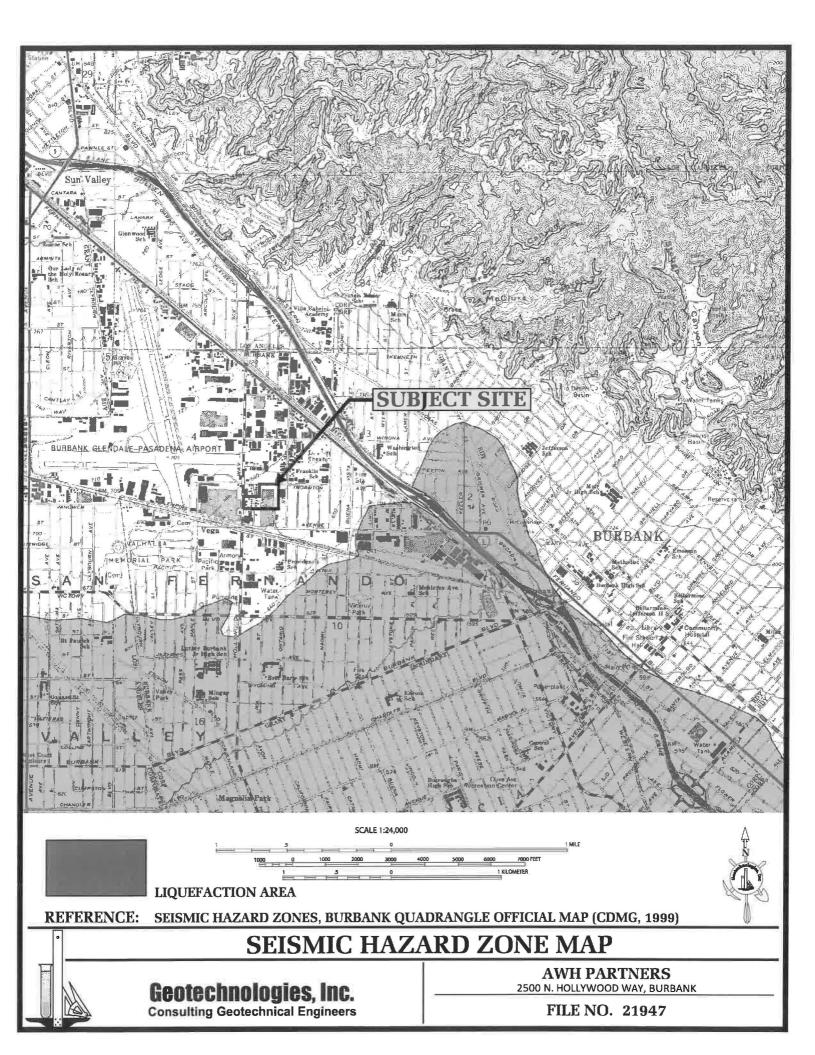










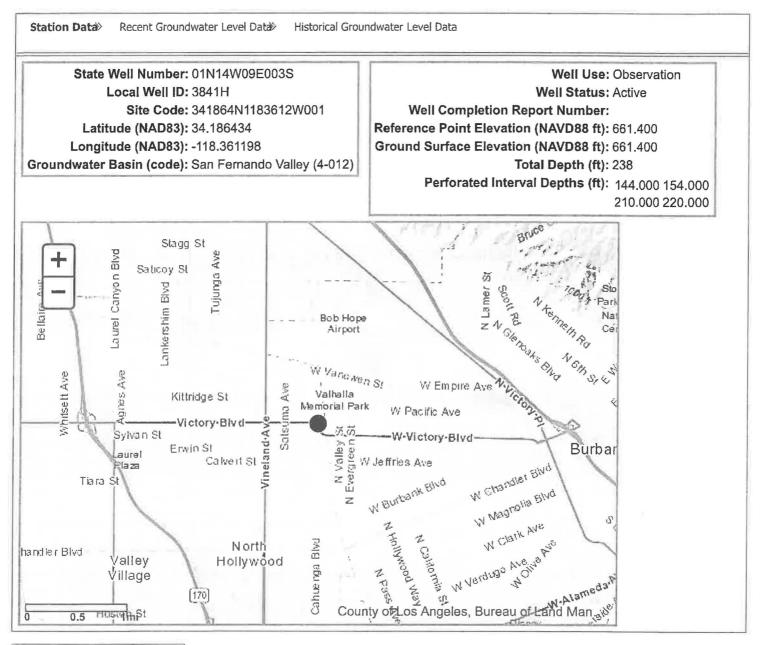


# GROUNDWATER DATA FROM WELL STATION (SITE CODE): 34186N1183612W001

# (13 PAGES)

# Groundwater Levels for Station 341864N1183612W001

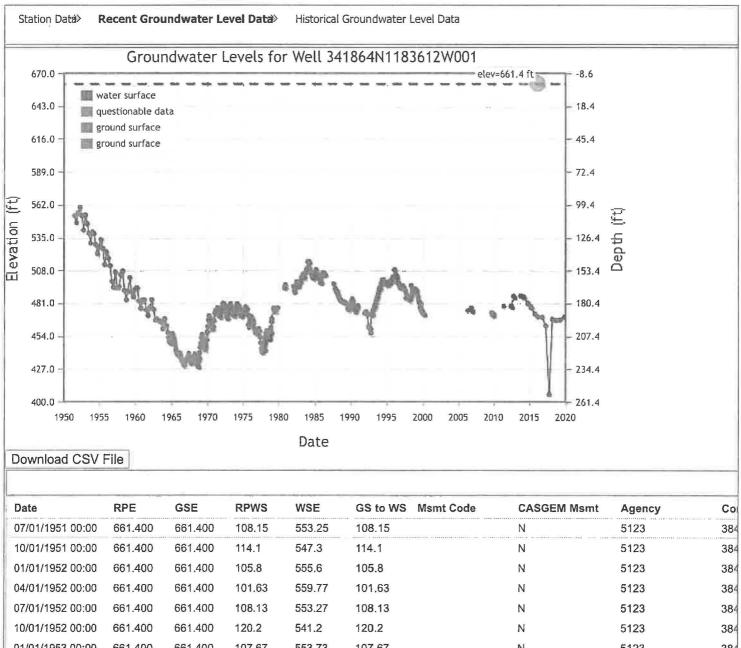
Data for your selected well is shown in the tabbed interface below. To view data managed in the updated WDL tables, including data collected under the CASGEM program, click the "Recent Groundwater Level Data" tab. To view data stored in the former WDL tables, click the "Historical Groundwater Level Data" tab. To download the data in CSV format, click the "Download CSV File" button on the respective tab. Please note that the vertical datum for "recent" measurements is NAVD88, while the vertical datum for "historical" measurements is NGVD29. To change your well selection criteria, click the "Perform a New Well Search" button.



Perform a New Well Search

# Groundwater Levels for Station 341864N1183612W001

Data for your selected well is shown in the tabbed interface below. To view data managed in the updated WDL tables, including data collected under the CASGEM program, click the "Recent Groundwater Level Data" tab. To view data stored in the former WDL tables, click the "Historical Groundwater Level Data" tab. To download the data in CSV format, click the "Download CSV File" button on the respective tab. Please note that the vertical datum for "recent" measurements is NAVD88, while the vertical datum for "historical" measurements is NGVD29. To change your well selection criteria, click the "Perform a New Well Search" button.



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04/01/1953 00:00	661.400	661.400	114.76	546.64	114.76	Ν	5123	384
07/01/1953 00:00	661.400	661.400	122.79	538.61	122.79	Ν	5123	384
10/01/1953 00:00	661.400	661.400	130.8	530.6	130.8	Ν	5123	384
01/01/1954 00:00	661.400	661.400	121.61	539,79	121.61	Ν	5123	384
04/01/1954 00:00	661.400	661.400	122.77	538.63	122.77	Ν	5123	384
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000000000000000000000000000000000000	C. LEWIS CO.	07/01/1957 00:00	661.400	661.400	167.71	493.69	167.71	N	5123	384
ONDOLOGIO         661.400         661.400         153.84         S07.65         153.84         N         5123         384           0701/1958         00.00         661.400         170.02         491.38         170.02         N         5123         384           0701/1958         00.00         661.400         177.32         484.08         177.32         N         5123         384           0701/1959         00.00         661.400         107.03         491.37         170.03         N         5123         384           0701/1959         00.00         661.400         177.13         480.11         171.29         N         5123         384           0701/1950         00.00         661.400         175.13         483.05         175.13         N         5123         384           0701/1960         00.00         661.400         167.64         483.76         167.54         N         5123         384           0701/1960         00.00         661.400         177.54         483.66         177.54         N         5123         384           0701/1960         00.00         661.400         177.41         483.99         177.41         N         5123         384	ALL ALL	10/01/1957 00:00	661.400	661.400	166.74	494.66	166.74	N	5123	384
Ord/11980         00:00         661.400         170.02         491.38         170.02         N         5123         384           10/01/1958         00:00         661.400         170.03         491.37         170.03         N         5123         384           04/01/1959         00:00         661.400         661.400         170.23         491.37         170.03         N         5123         384           04/01/1959         00:00         661.400         661.400         171.29         490.11         171.29         N         5123         384           04/01/1950         00:00         661.400         166.44         492.96         168.44         N         5123         384           04/01/1960         00:00         661.400         166.44         492.96         168.44         N         5123         384           04/01/1960         00:00         661.400         167.64         493.76         167.64         N         5123         384           04/01/1960         00:00         661.400         167.64         493.76         177.64         N         5123         384           04/01/1961         00:00         661.400         177.54         483.96         177.54		01/01/1958 00:00	661.400	661.400	156.87	504.53	156.87	N	5123	384
01/01/1950/02.03       0514.00       107.03       107.03       107.03       N       5123       384         01/01/1959/00.00       661.400       1661.400       177.32       184.08       177.32       N       5123       384         01/01/1959/00.00       661.400       1651.21       502.19       159.21       N       5123       384         01/01/1950/00.00       661.400       1661.400       175.13       486.27       175.13       N       5123       384         01/01/1960/00.00       661.400       167.64       493.76       167.64       N       5123       384         01/01/1960/00.00       661.400       167.64       483.06       177.54       N       5123       384         01/01/1960/00.00       661.400       167.64       483.06       177.54       N       5123       384         01/01/1961/00.00       661.400       167.64       483.06       177.54       N       5123       384         01/01/1961/00.00       661.400       167.64       483.06       177.54       N       5123       384         01/01/1961/00.00       661.400       167.64       470.76       190.64       N       5123       384         01/01/	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	04/01/1958 00:00	661.400	661.400	153.84	507,56	153.84	N	5123	384
Diol/1958/00:00         661.400         661.400         170.03         N         5123         384           04/01/1959/00:00         661.400         661.400         170.23         491.37         170.03         N         5123         384           07/01/1959/00:00         661.400         661.400         172.9         490.11         171.29         N         5123         384           10/01/1950/00:00         661.400         661.400         168.44         492.96         168.44         N         5123         384           04/01/1960/00:00         661.400         167.64         493.76         167.54         N         5123         384           01/01/1960/00:00         661.400         184.59         476.81         184.59         N         5123         384           01/01/1960/00:00         661.400         184.59         476.81         184.59         N         5123         384           01/01/1961/00:00         661.400         184.59         475.81         185.8         N         5123         384           01/01/1962/00:00         661.400         183.5         177.54         N         5123         384           01/01/1962/00:00         661.400         183.5         477.9 <th>A NUMBER OF STREET, ST</th> <th>07/01/1958 00:00</th> <th>661.400</th> <th>661.400</th> <th>170.02</th> <th>491.38</th> <th>170.02</th> <th>Ν</th> <th>5123</th> <th>384</th>	A NUMBER OF STREET, ST	07/01/1958 00:00	661.400	661.400	170.02	491.38	170.02	Ν	5123	384
Only 1025 00:00         661:400         661:400         159:21         Sol, 19         159:21         N         5123         384           07/01/1959 00:00         661:400         661:400         171:29         490.11         171:29         N         5123         384           01/01/1959 00:00         661:400         661:400         168:44         492:96         168:44         N         5123         384           04/01/1960 00:00         661:400         167:64         N         5123         384           04/01/1960 00:00         661:400         167:64         483:05         176:34         N         5123         384           01/01/1960 00:00         661:400         167:64         N         5123         384           01/01/1960 00:00         661:400         177:54         483:05         176:34         N         5123         384           01/01/1961 00:00         661:400         185.8         475.61         185.8         N         5123         384           01/01/1961 00:00         661:400         185.8         477.9         183.5         N         5123         384           01/01/1962 00:00         661:400         661:400         185.4         470:76         190.64 <th></th> <th>10/01/1958 00:00</th> <th>661.400</th> <th>661.400</th> <th>177.32</th> <th>484.08</th> <th>177.32</th> <th>N</th> <th>5123</th> <th>384</th>		10/01/1958 00:00	661.400	661.400	177.32	484.08	177.32	N	5123	384
Open Holds Diese Orde         661 400         171.29         N         5123         384           10/01/1969 00:00         661 400         661 400         168.44         492.96         168.44         N         5123         384           01/01/1960 00:00         661 400         167.64         493.76         167.64         N         5123         384           01/01/1960 00:00         661 400         167.64         493.76         167.64         N         5123         384           07/01/1960 00:00         661 400         177.54         483.66         176.34         N         5123         384           07/01/1961 00:00         661 400         177.54         483.86         177.54         N         5123         384           01/01/1961 00:00         661 400         185.8         476.81         184.59         N         5123         384           01/01/1961 00:00         661 400         185.8         477.6         185.5         N         5123         384           01/01/1962 00:00         661 400         185.4         475.9         185.5         N         5123         384           01/01/1962 00:00         661 400         185.4         475.96         165.44         N	11 11 11 11	01/01/1959 00:00	661.400	661.400	170.03	491.37	170.03	N	5123	384
One         One <th>1.1.1.1.1.1.1</th> <td>04/01/1959 00:00</td> <td>661.400</td> <td>661.400</td> <td>159.21</td> <td>502.19</td> <td>159.21</td> <td>N</td> <td>5123</td> <td>384</td>	1.1.1.1.1.1.1	04/01/1959 00:00	661.400	661.400	159.21	502.19	159.21	N	5123	384
0101/1980 00:00       651.400       661.400       168.44       492.96       168.44       N       5123       384         04/01/1960 00:00       661.400       167.64       493.76       167.64       N       5123       384         07/01/1960 00:00       661.400       167.64       493.76       167.64       N       5123       384         07/01/1960 00:00       661.400       167.64       493.76       167.64       N       5123       384         01/01/1960 00:00       661.400       167.54       483.86       177.54       N       5123       384         04/01/1961 00:00       661.400       177.54       483.99       177.41       N       5123       384         04/01/1961 00:00       661.400       185.8       475.6       195.8       N       5123       384         01/01/1962 00:00       661.400       185.8       475.6       195.8       N       5123       384         01/01/1962 00:00       661.400       183.5       477.9       183.5       N       5123       384         01/01/1962 00:00       661.400       184.4       475.96       185.44       N       5123       384         01/01/1962 00:00       661.400 <th>1001100</th> <td>07/01/1959 00:00</td> <td>661.400</td> <td>661.400</td> <td>171.29</td> <td>490.11</td> <td>171.29</td> <td>Ν</td> <td>5123</td> <td>384</td>	1001100	07/01/1959 00:00	661.400	661.400	171.29	490.11	171.29	Ν	5123	384
Outor 1980 00:00         661:400         661:400         187.64         493.76         187.64         N         5123         384           07/01/1960 00:00         661:400         167.64         493.76         178.34         N         5123         384           10/01/1960 00:00         661:400         161:400         177.54         483.86         177.54         N         5123         384           01/01/1961 00:00         661:400         161:400         177.54         483.86         177.54         N         5123         384           07/01/1961 00:00         661:400         166:400         177.41         483.99         177.41         N         5123         384           07/01/1961 00:00         661:400         185.8         475.6         185.8         N         5123         384           01/01/1962 00:00         661:400         183.5         477.9         183.5         N         5123         384           01/01/1962 00:00         661:400         183.4         475.96         185.4         N         5123         384           01/01/1962 00:00         661:400         194.4         466.91         194.4         N         5123         384           0/00/1963 00:00	The second s	10/01/1959 00:00	661.400	661.400	175.13	486.27	175.13	Ν	5123	384
Order         Order <th< th=""><th></th><th>01/01/1960 00:00</th><th>661.400</th><th>661.400</th><th>168.44</th><th>492.96</th><th>168.44</th><th>N</th><th>5123</th><th>384</th></th<>		01/01/1960 00:00	661.400	661.400	168.44	492.96	168.44	N	5123	384
Drive         Drive <thdrive< th=""> <thd< th=""><th>A DESCRIPTION OF A DESC</th><th>04/01/1960 00:00</th><th>661.400</th><th>661.400</th><th>167.64</th><th>493.76</th><th>167.64</th><th>Ν</th><th>5123</th><th>384</th></thd<></thdrive<>	A DESCRIPTION OF A DESC	04/01/1960 00:00	661.400	661.400	167.64	493.76	167.64	Ν	5123	384
No.6         Original Control	and the second se	07/01/1960 00:00	661.400	661.400	178.34	483.06	178.34	N	5123	384
04/01/1961 00:00       661.400       177.41       483.99       177.41       N       5123       384         07/01/1961 00:00       661.400       185.8       475.6       185.8       N       5123       384         10/01/1961 00:00       661.400       661.400       190.64       470.76       190.64       N       5123       384         01/01/1962 00:00       661.400       661.400       183.5       477.9       183.5       N       5123       384         04/01/1962 00:00       661.400       661.400       185.4       475.96       185.44       N       5123       384         01/01/1962 00:00       661.400       185.44       475.96       185.44       N       5123       384         01/01/1962 00:00       661.400       185.44       475.96       185.44       N       5123       384         01/01/1963 00:00       661.400       194.3       467.1       194.3       N       5123       384         01/01/1963 00:00       661.400       193.4       468       193.4       N       5123       384         01/01/1963 00:00       661.400       195.94       465.46       195.94       N       5123       384         0	The second se	10/01/1960 00:00	661.400	661.400	184.59	476.81	184.59	N	5123	384
OT/OT/1961 00:00         661.400         185.8         475.6         185.8         N         5123         384           10/01/1961 00:00         661.400         661.400         183.5         477.9         183.5         N         5123         384           01/01/1962 00:00         661.400         661.400         183.5         477.9         183.5         N         5123         384           04/01/1962 00:00         661.400         661.400         185.44         475.96         185.44         N         5123         384           07/01/1962 00:00         661.400         661.400         185.44         475.96         185.44         N         5123         384           01/01/1962 00:00         661.400         661.400         194.3         467.1         194.3         N         5123         384           01/01/1963 00:00         661.400         661.400         193.4         468         193.4         N         5123         384           01/01/1963 00:00         661.400         661.400         194.49         N         5123         384           01/01/1963 00:00         661.400         195.94         465.46         195.94         N         5123         384           01/01	Total Annual Line	01/01/1961 00:00	661.400	661.400	177.54	483.86	177.54	N	5123	384
0/10/11/961 00:00       661.400       661.400       190.64       470.76       190.64       N       5123       384         0/10/11/962 00:00       661.400       661.400       661.400       183.5       477.9       183.5       N       5123       384         0/10/11/962 00:00       661.400       661.400       185.44       475.96       185.44       N       5123       384         0/10/11/962 00:00       661.400       661.400       185.44       475.96       185.44       N       5123       384         0/10/11/962 00:00       661.400       661.400       194.3       467.1       194.3       N       5123       384         0/10/11/963 00:00       661.400       194.4       468       193.4       N       5123       384         0/10/11/963 00:00       661.400       193.4       468       195.94       N       5123       384         0/10/11/963 00:00       661.400       195.94       465.46       195.94       N       5123       384         0/10/11/963 00:00       661.400       193.18       468.22       193.18       N       5123       384         0/10/11/964 00:00       661.400       204.5       456.9       204.5	100000	04/01/1961 00:00	661.400	661.400	177.41	483.99	177.41	N	5123	384
01/01/1962 00:00       661.400       661.400       183.5       477.9       183.5       N       5123       384         04/01/1962 00:00       661.400       661.400       177.49       483.91       177.49       N       5123       384         07/01/1962 00:00       661.400       185.44       475.96       185.44       N       5123       384         01/01/1962 00:00       661.400       194.3       467.1       194.3       N       5123       384         01/01/1963 00:00       661.400       661.400       193.4       468       193.4       N       5123       384         01/01/1963 00:00       661.400       194.49       466.91       194.49       N       5123       384         01/01/1963 00:00       661.400       195.94       465.46       195.94       N       5123       384         01/01/1963 00:00       661.400       201.59       459.81       201.59       N       5123       384         01/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         01/01/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384	10000	07/01/1961 00:00	661.400	661.400	185.8	475.6	185.8	N	5123	384
04/01/1962 00:00661.400661.400177.49483.91177.49N512338407/01/1962 00:00661.400661.400185.44475.96185.44N512338410/01/1962 00:00661.400661.400194.3467.1194.3N512338401/01/1963 00:00661.400661.400193.4468193.4N512338401/01/1963 00:00661.400661.400194.49466.91194.49N512338407/01/1963 00:00661.400661.400195.94465.46195.94N512338407/01/1963 00:00661.400661.400201.59459.81201.59N512338401/01/1964 00:00661.400661.400193.18468.22193.18N512338401/01/1964 00:00661.400661.400198.89462.51198.89N512338401/01/1964 00:00661.400661.400204.5456.9204.5N512338401/01/1964 00:00661.400208.4453208.4N512338401/14/1964 00:00661.400211.6449.8211.6N512338401/13/1964 00:00661.400211.7448.7212.7N512338401/13/1964 00:00661.400211.4451.3210.1N512338401/13/1964 00:00661.400210.1451.3210.1<		10/01/1961 00:00	661,400	661,400	190.64	470.76	190.64	N	5123	384
07/01/1962 00:00661.400661.400185.44475.96185.44N512338410/01/1962 00:00661.400661.400194.3467.1194.3N512338401/01/1963 00:00661.400661.400193.4468193.4N512338401/01/1963 00:00661.400661.400194.49466.91194.49N512338401/01/1963 00:00661.400661.400195.94466.91195.94N512338401/01/1963 00:00661.400661.400195.94466.91195.94N512338401/01/1963 00:00661.400661.400201.59459.81201.59N512338401/01/1964 00:00661.400193.18468.22193.18N512338401/01/1964 00:00661.400198.89462.51198.89N512338401/11/1964 00:00661.400204.5456.9204.5N512338401/11/1964 00:00661.400208.4453208.4N512338401/13/1964 00:00661.400211.6449.8211.6N512338401/13/1964 00:00661.400213.3448.1213.3N512338401/13/1964 00:00661.400213.3448.1213.3N512338401/13/1964 00:00661.400210.1451.3210.1N5123384 <tr<< th=""><th></th><th>01/01/1962 00:00</th><th>661.400</th><th>661.400</th><th>183.5</th><th>477.9</th><th>183.5</th><th>Ν</th><th></th><th>384</th></tr<<>		01/01/1962 00:00	661.400	661.400	183.5	477.9	183.5	Ν		384
10/01/1962 00:00       661.400       194.3       467.1       194.3       N       5123       384         01/01/1963 00:00       661.400       193.4       468       193.4       N       5123       384         04/01/1963 00:00       661.400       661.400       194.49       466.91       194.49       N       5123       384         04/01/1963 00:00       661.400       661.400       195.94       465.46       195.94       N       5123       384         07/01/1963 00:00       661.400       661.400       201.59       459.81       201.59       N       5123       384         01/01/1963 00:00       661.400       661.400       201.59       459.81       201.59       N       5123       384         01/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         07/14/1964 00:00       661.400       211.6       449.8       211.6       N       5123       384 </th <th></th> <th>04/01/1962 00:00</th> <th>661.400</th> <th>661.400</th> <th>177.49</th> <th>483.91</th> <th>177.49</th> <th>N</th> <th></th> <th>384</th>		04/01/1962 00:00	661.400	661.400	177.49	483.91	177.49	N		384
01/01/1963 00:00       661.400       193.4       468       193.4       N       5123       384         04/01/1963 00:00       661.400       194.49       466.91       194.49       N       5123       384         07/01/1963 00:00       661.400       195.94       465.46       195.94       N       5123       384         07/01/1963 00:00       661.400       661.400       201.59       459.81       201.59       N       5123       384         10/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         07/14/1964 00:00       661.400       208.4       453       208.4       N       5123       384         07/14/1964 00:00       661.400		07/01/1962 00:00	661.400	661.400	185.44	475.96	185.44	N		384
04/01/1963 00:00       661.400       194.49       466.91       194.49       N       5123       384         07/01/1963 00:00       661.400       661.400       195.94       465.46       195.94       N       5123       384         10/01/1963 00:00       661.400       661.400       201.59       459.81       201.59       N       5123       384         10/01/1964 00:00       661.400       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         07/14/1964 00:00       661.400       208.4       453       208.4       N       5123       384         08/18/1964 00:00       661.400       211.6       449.8       211.6       N       5123       384         09/15/1964 00:00       661.400       212.7       448.7       212.7       N       5123       384		10/01/1962 00:00	661.400	661.400	194.3	467.1	194.3	Ν		384
07/01/1963 00:00       661.400       195.94       465.46       195.94       N       5123       384         10/01/1963 00:00       661.400       661.400       201.59       459.81       201.59       N       5123       384         01/01/1964 00:00       661.400       193.18       468.22       193.18       N       5123       384         04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         07/14/1964 00:00       661.400       208.4       453       208.4       N       5123       384         08/18/1964 00:00       661.400       211.6       449.8       211.6       N       5123       384         09/15/1964 00:00       661.400       212.7       448.7       212.7       N       5123       384         10/13/1964 00:00       661.400       213.3       448.1       213.3       N       5123       384         11/17/1964 00:00       661.400       <		01/01/1963 00:00	661.400	661.400	193.4	468	193.4	Ν	5123	384
10/01/1963 00:00661.400661.400201.59459.81201.59N512338401/01/1964 00:00661.400661.400193.18468.22193.18N512338404/01/1964 00:00661.400661.400198.89462.51198.89N512338406/16/1964 00:00661.400661.400204.5456.9204.5N512338406/16/1964 00:00661.400661.400208.4453208.4N512338408/18/1964 00:00661.400661.400211.6449.8211.6N512338409/15/1964 00:00661.400611.400212.7448.7212.7N512338410/13/1964 00:00661.400611.400213.3448.1213.3N512338411/17/1964 00:00661.400210.1451.3210.1N512338410/13/1964 00:00661.400208.7452.7208.7N512338411/17/1964 00:00661.400208.7452.7208.7N512338412/15/1964 00:00661.400208.7452.7208.7N512338401/12/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400605.6455.8205.6N<		04/01/1963 00:00	661.400	661.400	194.49	466.91	194.49	Ν	5123	384
01/01/1964 00:00661.400661.400193.18468.22193.18N512338404/01/1964 00:00661.400661.400198.89462.51198.89N512338406/16/1964 00:00661.400661.400204.5456.9204.5N512338407/14/1964 00:00661.400661.400208.4453208.4N512338408/18/1964 00:00661.400661.400211.6449.8211.6N512338409/15/1964 00:00661.400661.400212.7448.7212.7N512338410/13/1964 00:00661.400661.400213.3448.1213.3N512338410/13/1964 00:00661.400661.400210.1451.3210.1N512338411/17/1964 00:00661.400661.400208.7452.7208.7N512338412/15/1964 00:00661.400661.400205.6455.8205.6N512338401/12/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400205.6455.8205.6N512338402/16/1965 00:00661.400 <td< th=""><th></th><th>07/01/1963 00:00</th><th>661.400</th><th>661.400</th><th>195.94</th><th>465.46</th><th>195.94</th><th>Ν</th><th></th><th></th></td<>		07/01/1963 00:00	661.400	661.400	195.94	465.46	195.94	Ν		
04/01/1964 00:00       661.400       198.89       462.51       198.89       N       5123       384         06/16/1964 00:00       661.400       204.5       456.9       204.5       N       5123       384         07/14/1964 00:00       661.400       661.400       208.4       453       208.4       N       5123       384         08/18/1964 00:00       661.400       661.400       211.6       449.8       211.6       N       5123       384         09/15/1964 00:00       661.400       212.7       448.7       212.7       N       5123       384         10/13/1964 00:00       661.400       212.7       448.7       212.7       N       5123       384         10/13/1964 00:00       661.400       213.3       448.1       213.3       N       5123       384         11/17/1964 00:00       661.400       210.1       451.3       210.1       N       5123       384         12/15/1964 00:00       661.400       208.7       452.7       208.7       N       5123       384         12/15/1964 00:00       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.40		10/01/1963 00:00	661.400	661.400	201.59	459.81	201.59	Ν		
06/16/1964 00:00661.400204.5456.9204.5N512338407/14/1964 00:00661.400208.4453208.4N512338408/18/1964 00:00661.400661.400211.6449.8211.6N512338409/15/1964 00:00661.400661.400212.7448.7212.7N512338410/13/1964 00:00661.400661.400213.3448.1213.3N512338410/13/1964 00:00661.400661.400210.1451.3210.1N512338411/17/1964 00:00661.400661.400208.7452.7208.7N512338412/15/1964 00:00661.400661.400208.7452.7208.7N512338401/12/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6		01/01/1964 00:00	661.400	661.400	193.18	468.22	193.18			
07/14/1964 00:00661.400208.4453208.4N512338408/18/1964 00:00661.400661.400211.6449.8211.6N512338409/15/1964 00:00661.400661.400212.7448.7212.7N512338410/13/1964 00:00661.400661.400213.3448.1213.3N512338410/13/1964 00:00661.400661.400210.1451.3210.1N512338411/17/1964 00:00661.400661.400210.1451.3210.1N512338412/15/1964 00:00661.400661.400208.7452.7208.7N512338401/12/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400661.400205.6455.8205.6N512338402/16/1965 00:00661.400205.6455.8205.6N512338402/16/1965 00:00661.400205.6455.8205.6N512338402/16/1965 00:00661.400205.6455.8205.6N512338402/16/1965 00:00661.400205.6455.8205.6N5123384		04/01/1964 00:00	661.400	661.400	198.89	462.51	198.89	N		
08/18/1964 00:00       661.400       211.6       449.8       211.6       N       5123       384         09/15/1964 00:00       661.400       212.7       448.7       212.7       N       5123       384         10/13/1964 00:00       661.400       213.3       448.1       213.3       N       5123       384         10/13/1964 00:00       661.400       213.3       448.1       213.3       N       5123       384         11/17/1964 00:00       661.400       210.1       451.3       210.1       N       5123       384         12/15/1964 00:00       661.400       208.7       452.7       208.7       N       5123       384         01/12/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384		06/16/1964 00:00	661.400	661.400	204.5	456.9				
09/15/1964 00:00       661.400       661.400       212.7       448.7       212.7       N       5123       384         10/13/1964 00:00       661.400       213.3       448.1       213.3       N       5123       384         11/17/1964 00:00       661.400       210.1       451.3       210.1       N       5123       384         12/15/1964 00:00       661.400       208.7       452.7       208.7       N       5123       384         01/12/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384		07/14/1964 00:00	661.400	661.400	208.4	453				
10/13/1964 00:00       661.400       661.400       213.3       448.1       213.3       N       5123       384         11/17/1964 00:00       661.400       661.400       210.1       451.3       210.1       N       5123       384         12/15/1964 00:00       661.400       661.400       208.7       452.7       208.7       N       5123       384         01/12/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384		08/18/1964 00:00	661.400	661.400	211.6					
11/17/1964 00:00       661.400       661.400       210.1       451.3       210.1       N       5123       384         12/15/1964 00:00       661.400       661.400       208.7       452.7       208.7       N       5123       384         01/12/1965 00:00       661.400       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384		09/15/1964 00:00	661.400	661.400						1
12/15/1964 00:00       661.400       661.400       208.7       452.7       208.7       N       5123       384         01/12/1965 00:00       661.400       661.400       205.6       455.8       205.6       N       5123       384         02/16/1965 00:00       661.400       205.6       455.8       205.6       N       5123       384	1	10/13/1964 00:00	661.400	661.400						
01/12/1965 00:00         661.400         661.400         205.6         455.8         205.6         N         5123         384           02/16/1965 00:00         661.400         205.6         455.8         205.6         N         5123         384		11/17/1964 00:00	661.400							
02/16/1965 00:00 661.400 661.400 205.6 455.8 205.6 N 5123 384		12/15/1964 00:00								
03/16/1965 00:00 661.400 661.400 209 452.4 209 N 5123 384										
		03/16/1965 00:00	661.400	661.400	209	452.4	209	N	5123	384

	04/13/1965 00:00	661.400	661.400	209.8	451.6	209.8	Ν	5123	384
	05/18/1965 00:00	661.400	661.400	212.2	449.2	212.2	N	5123	384
	06/15/1965 00:00	661.400	661.400	214.7	446.7	214.7	Ν	5123	384
Ì	07/20/1965 00:00	661.400	661.400	218.1	443.3	218.1	Ν	5123	384
painty in fail time of	08/17/1965 00:00	661.400	661.400	220.1	441.3	220.1	N	5123	384
a series from the	09/21/1965 00:00	661,400	661.400	222	439.4	222	N	5123	384
-	10/19/1965 00:00	661.400	661.400	222.1	439.3	222.1	Ν	5123	384
Conception and in the	11/23/1965 00:00	661.400	661.400	223.1	438.3	223.1	Ν	5123	384
1	12/07/1965 00:00	661.400	661.400	223.4	438	223.4	Ν	5123	384
A second second	12/14/1965 00:00	661.400	661.400	223	438.4	223	N	5123	384
	12/21/1965 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
l	12/28/1965 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
100	01/18/1966 00:00	661.400	661.400	222.3	439.1	222.3	Ν	5123	384
	02/15/1966 00:00	661.400	661.400	221	440.4	221	N	5123	384
	03/15/1966 00:00	661.400	661.400	222.7	438.7	222.7	Ν	5123	384
2.4	04/19/1966 00:00	661.400	661.400	225.2	436.2	225.2	Ν	5123	384
ľ	05/17/1966 00:00	661.400	661.400	226.8	434.6	226.8	N	5123	384
	06/14/1966 00:00	661.400	661.400	228	433.4	228	N	5123	384
l	07/12/1966 00:00	661.400	661.400	228.9	432.5	228.9	Ν	5123	384
l	08/16/1966 00:00	661.400	661.400	230.5	430.9	230.5	N	5123	384
	09/13/1966 00:00	661.400	661.400	231.5	429.9	231.5	Ν	5123	384
and the second	10/18/1966 00:00	661.400	661.400	228.7	432.7	228.7	N	5123	384
A descent of	11/15/1966 00:00	661.400	661.400	227.2	434.2	227.2	N	5123	384
Average in standard	01/17/1967 00:00	661.400	661.400	226.6	434.8	226.6	N	5123	384
11-1-10-10-1-1-	02/14/1967 00:00	661.400	661.400	225.9	435.5	225.9	Ν	5123	384
10-1001-00	03/14/1967 00:00	661.400	661.400	225.3	436.1	225.3	Ν	5123	384
	04/18/1967 00:00	661.400	661.400	223.2	438.2	223.2	N	5123	384
Philippine - 1944	05/16/1967 00:00	661.400	661.400	221.6	439.8	221.6	N	5123	384
10 A. 10	06/20/1967 00:00	661.400	661.400	224.7	436.7	224.7	N	5123	384
A descent of the	07/18/1967 00:00	661.400	661.400	227.3	434.1	227.3	N	5123	384
	08/15/1967 00:00	661.400	661.400	229.2	432.2	229.2	N	5123	384
A LANGE AND	09/19/1967 00:00	661.400	661.400	230.2	431.2	230.2	N	5123	384
	10/24/1967 00:00	661.400	661.400	228.4	433	228.4	N	5123	384
	11/24/1967 00:00	661.400	661.400	228.4	433	228.4	N	5123	384
	01/16/1968 00:00	661.400	661.400	224.3	437.1	224.3	N	5123	384
	02/13/1968 00:00	661.400	661.400	224.6	436.8	224.6	N	5123	384
The state of the second	03/19/1968 00:00	661.400	661.400	222.2	439.2	222.2	N	5123	384
11 11 - A 18 A	04/23/1968 00:00	661.400	661.400	223.6	437.8	223.6	N	5123	384
**** N.S	05/14/1968 00:00	661.400	661,400	226.5	434.9	226.5	Ν	5123	384
-1440-1-10	06/18/1968 00:00	661.400	661.400	230.1	431.3	230.1	Ν	5123	384
And in State Library	07/16/1968 00:00	661.400	661.400	231.4	430	231.4	N	5123	384
bisher of the second	08/20/1968 00:00	661.400	661.400	232.2	429.2	232.2	Ν	5123	384
Commercial State	09/17/1968 00:00	661.400	661.400	232.6	428.8	232.6	Ν	5123	384
and a franker	10/15/1968 00:00	661.400	661.400	228.7	432.7	228.7	Ν	5123	384
and a survey of the	11/19/1968 00:00	661.400	661.400	221	440.4	221	Ν	5123	384
	12/12/1968 00:00	661.400	661.400	226.2	435.2	226.2	Ν	5123	384
A LOUIS AND	12/17/1968 00:00	661.400	661.400	216.9	444.5	216.9	N	5123	384
and a second second	01/14/1969 00:00	661.400	661.400	213.1	448.3	213.1	N	5123	384
1 10 1000	02/18/1969 00:00	661.400	661.400	208.9	452.5	208.9	Ν	5123	384

1	03/18/1969 00:00	661.400	661.400	206	455.4	206	Ν	5123	384
	04/15/1969 00:00	661.400	661.400	206.2	455.2	206.2	Ν	5123	384
	05/20/1969 00:00	661.400	661.400	210.1	451.3	210.1	Ν	5123	384
	06/17/1969 00:00	661.400	661.400	213.6	447.8	213.6	Ν	5123	384
	07/15/1969 00:00	661.400	661.400	217.7	443.7	217.7	Ν	5123	384
100.00	08/19/1969 00:00	661.400	661.400	218.9	442.5	218.9	Ν	5123	384
	09/16/1969 00:00	661.400	661.400	215.8	445.6	215.8	Ν	5123	384
ath 112,000	10/14/1969 00:00	661.400	661.400	214.2	447.2	214.2	N	5123	384
and in	11/18/1969 00:00	661.400	661.400	210.5	450.9	210.5	Ν	5123	384
-	12/16/1969 00:00	661.400	661.400	204.1	457.3	204.1	Ν	5123	384
	01/13/1970 00:00	661.400	661.400	199.6	461.8	199.6	Ν	5123	384
1.10	02/17/1970 00:00	661.400	661.400	194.1	467.3	194.1	Ν	5123	384
	03/17/1970 00:00	661.400	661.400	190.6	470.8	190.6	Ν	5123	384
	04/14/1970 00:00	661.400	661.400	191.6	469.8	191.6	N	5123	384
and second	05/19/1970 00:00	661.400	661.400	194.1	467.3	194.1	N	5123	384
1	06/16/1970 00:00	661.400	661.400	196.4	465	196.4	Ν	5123	384
1	07/14/1970 00:00	661.400	661.400	198.1	463.3	198.1	N	5123	384
1	08/18/1970 00:00	661.400	661.400	200.6	460.8	200.6	Ν	5123	384
	09/15/1970 00:00	661.400	661.400	202.4	459	202.4	Ν	5123	384
	10/13/1970 00:00	661.400	661.400	199.5	461.9	199.5	Ν	5123	384
4 1440	11/17/1970 00:00	661.400	661.400	194.5	466.9	194.5	Ν	5123	384
	12/29/1970 00:00	661.400	661.400	188.9	472.5	188.9	Ν	5123	384
and the state of the	01/19/1971 00:00	661.400	661.400	186.6	474.8	186.6	Ν	5123	384
In the Control	02/16/1971 00:00	661.400	661.400	186.8	474.6	186.8	Ν	5123	384
and a second second	03/16/1971 00:00	661.400	661.400	186	475.4	186	Ν	5123	384
a real dates	04/20/1971 00:00	661.400	661.400	186.9	474.5	186.9	Ν	5123	384
14	05/18/1971 00:00	661.400	661.400	184.1	477.3	184.1	Ν	5123	384
1911	06/01/1971 00:00	661.400	661.400	184.2	477.2	184.2	Ν	5123	384
	07/13/1971 00:00	661.400	661.400	188.3	473.1	188.3	N	5123	384
1.0.100.00	08/17/1971 00:00	661.400	661.400	191.4	470	191.4	N	5123	384
ę	09/14/1971 00:00	661.400	661.400	190.8	470.6	190.8	N	5123	384
A1 + 41.4 + 1	10/12/1971 00:00	661.400	661.400	191.9	469.5	191.9	Ν	5123	384
)	11/16/1971 00:00	661.400	661.400	188.8	472.6	188.8	Ν	5123	384
ł	12/14/1971 00:00	661.400	661.400	185.2	476.2	185.2	Ν	5123	384
I	01/11/1972 00:00	661.400	661.400	183.2	478.2	183.2	N	5123	384
14 -	02/15/1972 00:00	661.400	661.400	180.2	481.2	180.2	Ν	5123	384
5/8 IV	03/14/1972 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
d manufacture -	04/18/1972 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
And Address	05/16/1972 00:00	661.400	661.400	182.4	479	182.4	N	5123	384
- sent and an a	06/20/1972 00:00	661.400	661.400	184.5	476.9	184.5	N	5123	384
Mr. Philadelphia	07/18/1972 00:00	661.400	661.400	188.2	473.2	188.2	N	5123	384
	08/15/1972 00:00	661.400	661.400	191.2	470.2	191.2	N	5123	384
111- 34 MILL	09/19/1972 00:00	661.400	661.400	192.7	468.7	192.7	N	5123	384
C LINE MARKING	10/03/1972 00:00	661.400	661.400	192.8	468.6	192.8	N	5123	384
Sector and the sector	10/17/1972 00:00	661.400	661.400	191.3	470.1	191.3	N	5123	384
re rataria mi 6 juliu	11/14/1972 00:00	661.400	661.400	188.3	473.1	188.3	N	5123	384
	12/12/1972 00:00	661.400	661.400	185.4	476	185.4	N	5123	384
Print Lan Land	01/16/1973 00:00	661.400	661.400	184.6	476.8	184.6	N	5123	384
-	02/13/1973 00:00	661.400	661.400	182	479.4	182	Ν	5123	384

	03/13/1973 00:00	661.400	661.400	180.7	480.7	180.7	Ν	5123	384
l	04/17/1973 00:00	661.400	661.400	182.9	478.5	182.9	Ν	5123	384
	05/15/1973 00:00	661.400	661.400	185.1	476.3	185.1	Ν	5123	384
:	06/19/1973 00:00	661.400	661.400	187.2	474.2	187.2	Ν	5123	384
	07/17/1973 00:00	661.400	661.400	189.9	471.5	189.9	Ν	5123	384
a she was	08/14/1973 00:00	661.400	661.400	189.8	471.6	189.8	N	5123	384
A CONTRACT AND	09/18/1973 00:00	661.400	661,400	190.6	470.8	190.6	Ν	5123	384
ALT - BUILD ARE A	10/16/1973 00:00	661.400	661.400	190.1	471.3	190.1	N	5123	384
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	11/13/1973 00:00	661.400	661.400	187.9	473.5	187.9	N	5123	384
8.2.2	12/18/1973 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
100 CO 100	01/19/1974 00:00	661.400	661.400	182.2	479.2	182.2	Ν	5123	384
	02/19/1974 00:00	661.400	661.400	181.1	480.3	181.1	N	5123	384
ALC: NO. OF TAXABLE	02/26/1974 00:00	661.400	661.400	180.8	480.6	180.8	N	5123	384
1	03/12/1974 00:00	661.400	661.400	184.2	477.2	184.2	Ν	5123	384
100.000	04/09/1974 00:00	661.400	661.400	186.9	474.5	186.9	Ν	5123	384
1.1.1.10	05/21/1974 00:00	661.400	661.400	184	477.4	184	N	5123	384
- A.R. 55.45	05/28/1974 00:00	661.400	661.400	183.7	477.7	183.7	Ν	5123	384
	06/11/1974 00:00	661.400	661.400	183.1	478.3	183.1	Ν	5123	384
A 12 . 14	07/02/1974 00:00	661.400	661.400	184.4	477	184.4	Ν	5123	384
- 0. 011 -0	07/16/1974 00:00	661.400	661.400	186.1	475.3	186.1	N	5123	384
*-(40 c	07/30/1974 00:00	661.400	661.400	187.5	473.9	187.5	Ν	5123	384
A share a star	08/13/1974 00:00	661.400	661.400	189.4	472	189.4	Ν	5123	384
the second s	08/27/1974 00:00	661.400	661.400	190.9	470.5	190.9	N	5123	384
a state of the second second	09/17/1974 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
	09/24/1974 00:00	661.400	661.400	190.9	470.5	190.9	N	5123	384
	10/15/1974 00:00	661.400	661.400	190.1	471.3	190.1	N	5123	384
	11/12/1974 00:00	661.400	661.400	189.4	472	189.4	N	5123	384
1 1 1 1 1 1 1	11/26/1974 00:00	661.400	661.400	188.2	473.2	188.2	N	5123	384
and approximate	12/17/1974 00:00	661.400	661.400	187.4	474	187.4	Ν	5123	384
- A 400 A - 4	01/07/1975 00:00	661.400	661.400	187.3	474.1	187.3	N	5123	384
State on Print of	02/18/1975 00:00	661.400	661.400	185.7	475.7	185.7	N	5123	384
10000	03/25/1975 00:00	661.400	661.400	185.2	476.2	185.2	N	5123	384
Contract States	04/22/1975 00:00	661.400	661.400	183.5	477.9	183.5	Ν	5123	384
- 10 1 10 10	05/27/1975 00:00	661.400	661.400	184.7	476.7	184.7	Ν	5123	384
	06/24/1975 00:00	661.400	661.400	184	477.4	184	Ν	5123	384
	07/29/1975 00:00	661.400	661.400	189.7	471.7	189.7	Ν	5123	384
112 11 194	09/16/1975 00:00	661.400	661.400	198	463.4	198	Ν	5123	384
a Malan Sustan	10/14/1975 00:00	661.400	661.400	200.3	461.1	200.3	Ν	5123	384
and the second s	11/18/1975 00:00	661.400	661.400	196.3	465.1	196.3	Ν	5123	384
Martin Constant, Martin	12/16/1975 00:00	661.400	661.400	192.6	468.8	192.6	Ν	5123	384
and the second	01/13/1976 00:00	661.400	661.400	191.1	470.3	191.1	Ν	5123	384
ACCESS OF A DESCRIPTION	02/17/1976 00:00	661.400	661.400	191.6	469.8	191.6	Ν	5123	384
and other the same	03/16/1976 00:00	661.400	661.400	194.5	466.9	194.5	N	5123	384
1.00 K 10	04/13/1976 00:00	661.400	661.400	193.2	468.2	193.2	N	5123	384
And And Address	05/18/1976 00:00	661.400	661.400	194.4	467	194.4	N	5123	384
CTO WALLAND	06/15/1976 00:00	661.400	661.400	197.7	463.7	197.7	N	5123	384
Contraction of the	07/13/1976 00:00	661.400	661.400	200.8	460.6	200.8	N	5123	384
ALL REAL REAL	08/17/1976 00:00	661.400	661.400	202.8	458.6	202.8	N	5123	384
P.Common Street	09/14/1976 00:00	661.400	661.400	205	456.4	205	Ν	5123	384

ľ	10/12/1976 00:00	661.400	661.400	204.2	457.2	204.2	Ν	5123	384	
	11/16/1976 00:00	661.400	661.400	205.2	456.2	205.2	Ν	5123	384	
	12/14/1976 00:00	661.400	661.400	204.8	456.6	204.8	Ν	5123	384	
	01/18/1977 00:00	661.400	661.400	202.9	458.5	202.9	Ν	5123	384	
	02/15/1977 00:00	661.400	661.400	202	459.4	202	Ν	5123	384	
	03/15/1977 00:00	661,400	661.400	201.2	460.2	201.2	Ν	5123	384	
Anto, in web.tr.	04/19/1977 00:00	661.400	661.400	203.3	458.1	203.3	N	5123	384	
the antidation of	05/17/1977 00:00	661.400	661.400	208.2	453.2	208.2	N	5123	384	
100 mm	06/14/1977 00:00	661.400	661.400	213	448.4	213	Ν	5123	384	
ALL STREET, ST	07/19/1977 00:00	661.400	661.400	217.6	443.8	217.6	Ν	5123	384	
-	08/16/1977 00:00	661.400	661.400	220.3	441.1	220.3	Ν	5123	384	
	09/13/1977 00:00	661.400	661.400	221	440.4	221	N	5123	384	
	10/18/1977 00:00	661.400	661.400	219.4	442	219.4	Ν	5123	384	
1	11/15/1977 00:00	661.400	661.400	218.8	442.6	218.8	N	5123	384	
	12/06/1977 00:00	661.400	661.400	218.4	443	218.4	N	5123	384	
	12/13/1977 00:00	661.400	661.400	218.2	443.2	218.2	Ν	5123	384	
10 Miles 10	12/20/1977 00:00	661.400	661.400	218.1	443.3	218.1	N	5123	384	
State of the state of the state	12/27/1977 00:00	661.400	661.400	217.6	443.8	217.6	Ν	5123	384	
	01/03/1978 00:00	661.400	661.400	215.8	445.6	215.8	Ν	5123	384	
	01/10/1978 00:00	661.400	661.400	213.9	447.5	213.9	Ν	5123	384	
	01/17/1978 00:00	661.400	661.400	212,7	448.7	212.7	Ν	5123	384	
-	01/24/1978 00:00	661.400	661.400	211.5	449.9	211.5	N	5123	384	
STATISTICS IN CONTRACTOR	01/31/1978 00:00	661.400	661.400	210.5	450.9	210.5	N	5123	384	
0 54 P -4047 - 411	02/07/1978 00:00	661.400	661.400	209.4	452	209.4	Ν	5123	384	
	02/14/1978 00:00	661.400	661.400	208.5	452.9	208.5	N	5123	384	
Take of the second	02/21/1978 00:00	661.400	661.400	208	453.4	208	Ν	5123	384	
ł	02/28/1978 00:00	661.400	661.400	207.4	454	207.4	Ν	5123	384	
	03/07/1978 00:00	661.400	661.400	207	454.4	207	N	5123	384	
10.00	03/14/1978 00:00	661.400	661.400	206.4	455	206.4	N	5123	384	
	03/21/1978 00:00	661.400	661.400	205.8	455.6	205.8	N	5123	384	
	03/28/1978 00:00	661.400	661.400	205.3	456.1	205.3	N	5123	384	
ł	04/04/1978 00:00	661.400	661.400	205	456.4	205	N	5123	384	
	04/11/1978 00:00	661.400	661.400	204.5	456.9	204.5	N	5123	384	
	04/18/1978 00:00	661.400	661.400	204.2	457.2	204.2	N	5123	384	
	04/25/1978 00:00	661.400	661.400	204.7	456.7	204.7	Ν	5123	384	
-	05/02/1978 00:00	661.400	661.400	204	457.4	204	Ν	5123	384	
	05/09/1978 00:00	661.400	661.400	203.1	458.3	203.1	N	5123	384	
	05/16/1978 00:00	661.400	661.400	202.7	458.7	202.7	Ν	5123	384	
	05/23/1978 00:00	661.400	661.400	203.2	458.2	203.2	N	5123	384	
	05/30/1978 00:00	661.400	661.400	203.2	458.2	203.2	N	5123	384	
	06/06/1978 00:00	661.400	661.400	204.1	457.3	204.1	Ν	5123	384	
- Nova LPRiss come a	06/13/1978 00:00	661.400	661.400	204.5	456.9	204.5	Ν	5123	384	
1 - 107, 52 Term - 5	06/20/1978 00:00	661.400	661.400	204.8	456.6	204.8	Ν	5123	384	
Order and the second	06/27/1978 00:00	661.400	661.400	205.1	456.3	205.1	N	5123	384	
A CONTRACTOR OF A CONTRACTOR O	07/04/1978 00:00	661.400	661.400	206.3	455.1	206.3	N	5123	384	
L. BORK POPULA - B	07/11/1978 00:00	661.400	661.400	207.6	453.8	207.6	N	5123	384	
Model and Articlation of	07/18/1978 00:00	661.400	661.400	209.1	452.3	209.1	N	5123	384	
these advector	07/25/1978 00:00	661.400	661.400	209.3	452.1	209.3	N	5123	384	
a state of the state	08/01/1978 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384	

Ĩ	08/08/1978 00:00	661.400	661.400	208.9	452.5	208.9	Ν	5123	384
	08/15/1978 00:00	661.400	661.400	208.9	452.5	208.9	N	5123	384
	08/22/1978 00:00	661.400	661.400	209.1	452.3	209.1	Ν	5123	384
	08/29/1978 00:00	661.400	661.400	209.1	452.3	209.1	Ν	5123	384
1.1.4	09/05/1978 00:00	661.400	661.400	209	452.4	209	Ν	5123	384
	09/12/1978 00:00	661.400	661.400	206.8	454.6	206.8	N	5123	384
1 1 1 1	09/19/1978 00:00	661.400	661.400	205.2	456.2	205.2	Ν	5123	384
LaTela	09/26/1978 00:00	661.400	661.400	204.2	457.2	204.2	N	5123	384
1	10/03/1978 00:00	661.400	661.400	203.5	457.9	203.5	N	5123	384
I	10/10/1978 00:00	661.400	661.400	204.6	456.8	204.6	N	5123	384
	10/17/1978 00:00	661.400	661.400	204.6	456.8	204.6	Ν	5123	384
	10/24/1978 00:00	661.400	661.400	204	457.4	204	Ν	5123	384
Acres 10	10/31/1978 00:00	661.400	661.400	202.9	458.5	202.9	N	5123	384
	11/28/1978 00:00	661.400	661.400	200.4	461	200.4	Ν	5123	384
	12/19/1978 00:00	661.400	661.400	195.7	465.7	195.7	N	5123	384
4	01/02/1979 00:00	661.400	661.400	193.3	468.1	193.3	N	5123	384
	03/27/1979 00:00	661.400	661.400	185	476.4	185	N	5123	384
1	04/24/1979 00:00	661.400	661.400	184.7	476.7	184.7	Ν	5123	384
1 1411 Y	05/01/1979 00:00	661.400	661.400	184.2	477.2	184.2	N	5123	384
	05/08/1979 00:00	661.400	661.400	184.9	476.5	184.9	Ν	5123	384
1000	05/15/1979 00:00	661.400	661.400	185.8	475.6	185.8	Ν	5123	384
100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100	05/22/1979 00:00	661.400	661.400	186.7	474.7	186.7	Ν	5123	384
- Marine Marine	05/29/1979 00:00	661.400	661.400	187.4	474	187.4	N	5123	384
and the second second	11/13/1979 00:00	661.400	661.400	184.1	477.3	184.1	Ν	5123	384
Contract Contract	11/04/1980 00:00	661.400	661.400	167.9	493.5	167.9	N	5123	384
A DOLLARS	11/11/1980 00:00	661.400	661.400	167.5	493.9	167.5	Ν	5123	384
A Shi man	11/18/1980 00:00	661.400	661.400	166	495.4	166	N	5123	384
	11/25/1980 00:00	661.400	661.400	165	496.4	165	N	5123	384
1	01/19/1982 00:00	661.400	661.400	166.5	494.9	166.5	N	5123	384
an 20 a	02/18/1982 00:00	661.400	661.400	169.9	491.5	169.9	Ν	5123	384
ALL NO WE WANTED	03/23/1982 00:00	661.400	661.400	171.5	489.9	171.5	Ν	5123	384
And the second	04/13/1982 00:00	661.400	661.400	168.3	493.1	168.3	N	5123	384
	05/11/1982 00:00	661.400	661.400	165.8	495.6	165.8	N	5123	384
Service of the	06/15/1982 00:00	661.400	661.400	162.6	498.8	162.6	N	5123	384
	07/20/1982 00:00	661.400	661.400	163.3	498.1	163.3	N	5123	384
	08/31/1982 00:00	661.400	661.400	164.4	497	164.4	Ν	5123	384
	09/21/1982 00:00	661.400	661.400	165.6	495.8	165.6	N	5123	384
on one law	10/12/1982 00:00	661,400	661.400	166.7	494.7	166.7	Ν	5123	384
	11/16/1982 00:00	661.400	661.400	163.8	497.6	163.8	Ν	5123	384
- Andrew Statement	12/14/1982 00:00	661.400	661.400	162.2	499.2	162.2	N	5123	384
1000	01/11/1983 00:00	661.400	661.400	162.7	498.7	162.7	Ν	5123	384
A DECEMBER OF	02/22/1983 00:00	661.400	661.400	160.9	500.5	160.9	Ν	5123	384
	03/15/1983 00:00	661.400	661.400	158.7	502.7	158.7	Ν	5123	384
AT MARKED	04/12/1983 00:00	661.400	661.400	158.2	503.2	158.2	Ν	5123	384
P. D. and in Man	05/17/1983 00:00	661.400	661.400	156.4	505	156.4	Ν	5123	384
1. 10.00.00	06/14/1983 00:00	661.400	661.400	158	503.4	158	Ν	5123	384
ALL LOOK DIVE	07/19/1983 00:00	661.400	661.400	158.7	502.7	158.7	Ν	5123	384
** 4074F	08/16/1983 00:00	661.400	661.400	159.1	502.3	159.1	Ν	5123	384
An I COMMITTEE	09/20/1983 00:00	661.400	661.400	155.8	505.6	155.8	Ν	5123	384

1	10/25/1983 00:00	661.400	661.400	153.5	507.9	153.5	Ν	5123	384
	11/22/1983 00:00	661.400	661.400	154	507.4	154	Ν	5123	384
	12/13/1983 00:00	661.400	661.400	151.2	510.2	151.2	N	5123	384
	01/24/1984 00:00	661.400	661.400	146.5	514.9	146.5	Ν	5123	384
1. 11. Mar. 1. 11. 1	02/21/1984 00:00	661.400	661.400	146.1	515.3	146.1	Ν	5123	384
1	03/20/1984 00:00	661.400	661.400	147.1	514.3	147.1	Ν	5123	384
a and and	04/24/1984 00:00	661.400	661.400	146.1	515.3	146.1	Ν	5123	384
ALL 1. 1. 1. 1.	05/22/1984 00:00	661.400	661.400	151.6	509.8	151.6	Ν	5123	384
	06/19/1984 00:00	661.400	661.400	153.6	507.8	153.6	Ν	5123	384
	07/10/1984 00:00	661.400	661.400	154.9	506.5	154.9	Ν	5123	384
1.000	08/14/1984 00:00	661.400	661.400	156.7	504.7	156.7	N	5123	384
an areas	09/18/1984 00:00	661.400	661.400	158.3	503.1	158.3	Ν	5123	384
and courses	10/16/1984 00:00	661.400	661.400	159.3	502.1	159.3	Ν	5123	384
l	11/13/1984 00:00	661.400	661.400	160	501.4	160	Ν	5123	384
	12/11/1984 00:00	661.400	661.400	159.2	502.2	159.2	Ν	5123	384
	01/15/1985 00:00	661.400	661.400	156.9	504.5	156.9	N	5123	384
	02/12/1985 00:00	661.400	661.400	156.9	504.5	156.9	N	5123	384
÷	03/27/1985 00:00	661.400	661.400	152.6	508.8	152.6	N	5123	384
	04/16/1985 00:00	661.400	661.400	154	507.4	154	N	5123	384
	05/21/1985 00:00	661.400	661.400	159.3	502.1	159.3	N	5123	384
	06/25/1985 00:00	661.400	661.400	156.5	504.9	156.5	N	5123	384
and the second second	07/30/1985 00:00	661,400	661.400	158.2	503.2	158.2	N	5123	384
	08/27/1985 00:00	661.400	661.400	159.2	502.2	159.2	N	5123	384
and a strength	09/24/1985 00:00	661.400	661.400	160.7	500.7	160.7	Ν	5123	384
Autor at at a	10/29/1985 00:00	661.400	661.400	163.7	497.7	163.7	Ν	5123	384
	11/26/1985 00:00	661.400	661.400	163.3	498.1	163.3	Ν	5123	384
1	12/10/1985 00:00	661.400	661.400	162.3	499.1	162.3	N	5123	384
1.44	01/28/1986 00:00	661.400	661.400	158	503.4	158	Ν	5123	384
	02/25/1986 00:00	661.400	661.400	155.6	505.8	155.6	N	5123	384
	03/25/1986 00:00	661.400	661.400	155.2	506.2	155.2	Ν	5123	384
	04/29/1986 00:00	661,400	661.400	156.8	504.6	156.8	N	5123	384
	05/27/1986 00:00	661.400	661.400	155.9	505.5	155.9	Ν	5123	384
C MALERIA AN	07/01/1986 00:00	661.400	661.400	156.7	504.7	156.7	Ν	5123	384
And A lot	09/22/1987 00:00	661.400	661.400	164.3	497.1	164.3	N	5123	384
1	11/24/1987 00:00	661.400	661.400	168.1	493.3	168.1	N	5123	384
	12/29/1987 00:00	661.400	661.400	168.8	492.6	168.8	Ν	5123	384
	01/26/1988 00:00	661.400	661.400	170.5	490.9	170.5	Ν	5123	384
	02/23/1988 00:00	661.400	661.400	170.9	490.5	170.9	Ν	5123	384
an an investor	03/29/1988 00:00	661.400	661.400	170.6	490.8	170.6	Ν	5123	384
and the second	04/26/1988 00:00	661.400	661.400	173.4	488	173.4	N	5123	384
a particular dansa	05/24/1988 00:00	661.400	661.400	174.2	487.2	174.2	Ν	5123	384
	06/21/1988 00:00	661.400	661.400	175.5	485.9	175.5	Ν	5123	384
water of the s	07/26/1988 00:00	661.400	661.400	176.7	484.7	176.7	N	5123	384
and the summarian	08/23/1988 00:00	661.400	661.400	177.2	484.2	177.2	Ν	5123	384
A PROPERTY OF	09/20/1988 00:00	661.400	661.400	177.8	483.6	177.8	Ν	5123	384
States of Street, Street, St.	10/25/1988 00:00	661.400	661.400	178.6	482.8	178.6	Ν	5123	384
tout-it's 'th' adm	11/22/1988 00:00	661.400	661.400	179	482.4	179	Ν	5123	384
and the state	12/20/1988 00:00	661.400	661.400	179	482.4	179	Ν	5123	384
	01/24/1989 00:00	661.400	661.400	179	482.4	179	Ν	5123	384
181									

I	02/21/1989 00:00	661.400	661.400	179.3	482.1	179.3	N	5123	384
	03/21/1989 00:00	661.400	661.400	179.5	481.9	179.5	N	5123	384
3	04/18/1989 00:00	661.400	661.400	179.9	481.5	179.9	Ν	5123	384
- 1 -	05/16/1989 00:00	661.400	661.400	180.1	481.3	180.1	Ν	5123	384
- 1. 20	06/20/1989 00:00	661.400	661.400	181	480.4	181	Ν	5123	384
	07/18/1989 00:00	661.400	661.400	181.5	479.9	181.5	Ν	5123	384
11-12-21-0-14	08/22/1989 00:00	661.400	661.400	184	477.4	184	Ν	5123	384
10.00 Miles	09/26/1989 00:00	661.400	661,400	185.8	475.6	185.8	Ν	5123	384
A	10/31/1989 00:00	661.400	661.400	184.8	476.6	184.8	Ν	5123	384
	11/28/1989 00:00	661.400	661.400	184.4	477	184.4	Ν	5123	384
10.10	12/19/1989 00:00	661.400	661.400	183.4	478	183.4	Ν	5123	384
1	01/23/1990 00:00	661.400	661.400	182.2	479.2	182.2	Ν	5123	384
1. 1. A AD. 2.	02/27/1990 00:00	661.400	661,400	179	482.4	179	Ν	5123	384
10	03/27/1990 00:00	661.400	661,400	177.8	483.6	177.8	Ν	5123	384
	04/17/1990 00:00	661.400	661,400	176.8	484.6	176.8	Ν	5123	384
5877 Y	05/29/1990 00:00	661.400	661.400	179.1	482.3	179.1	N	5123	384
ł	06/26/1990 00:00	661.400	661.400	182.4	479	182.4	N	5123	384
	07/31/1990 00:00	661.400	661.400	183.3	478.1	183.3	N	5123	384
ł	08/28/1990 00:00	661.400	661.400	185.4	476	185.4	N	5123	384
ł	09/18/1990 00:00	661.400	661.400	186.5	474.9	186.5	N	5123	384
-	10/02/1990 00:00	661.400	661.400	187.5	473.9	187.5	Ν	5123	384
ALL AND DOM	11/13/1990 00:00	661.400	661.400	185.3	476.1	185.3	Ν	5123	384
- or make, m	12/04/1990 00:00	661.400	661.400	184.4	477	184.4	Ν	5123	384
ALIGN NO.1	01/08/1991 00:00	661.400	661.400	183.3	478.1	183.3	Ν	5123	384
and the second	02/05/1991 00:00	661.400	661.400	182.1	479.3	182.1	N	5123	384
C C COMPANY	01/14/1992 00:00	661.400	661.400	188.6	472.8	188.6	N	5123	384
	02/18/1992 00:00	661.400	661.400	187.8	473.6	187.8	Ν	5123	384
ALL LAND	03/10/1992 00:00	661.400	661.400	187.8	473.6	187.8	N	5123	384
1.00	04/21/1992 00:00	661.400	661.400	187.6	473.8	187.6	Ν	5123	384
	05/05/1992 00:00	661.400	661.400	189.4	472	189.4	Ν	5123	384
-	07/21/1992 00:00	661.400	661.400	199.3	462.1	199.3	N	5123	384
11.12	08/04/1992 00:00	661.400	661.400	200.1	461.3	200.1	N	5123	384
l	09/01/1992 00:00	661.400	661.400	200.4	461	200.4	N	5123	384
C Constants ( ) -	10/06/1992 00:00	661.400	661.400	201.2	460.2	201.2	N	5123	384
4	11/10/1992 00:00	661.400	661.400	204.9	456.5	204.9	N	5123	384
ł	12/01/1992 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
44.1.1	01/12/1993 00:00	661.400	661.400	188.5	472.9	188.5	N	5123	384
100	02/04/1993 00:00	661.400	661.400	189.7	471.7	189.7	N	5123	384
	03/10/1993 00:00	661.400	661,400	186	475.4	186	N	5123	384
Contraction of the local distribution of the	04/13/1993 00:00	661.400	661.400	184.2	477.2	184.2	Ν	5123	384
and the second	05/04/1993 00:00	661.400	661.400	182.9	478.5	182.9	Ν	5123	384
1000 C	06/01/1993 00:00	661.400	661.400	181.5	479.9	181.5	Ν	5123	384
A COMPANY OF A	07/06/1993 00:00	661.400	661.400	180.4	481	180.4	Ν	5123	384
	08/03/1993 00:00	661.400	661.400	178.2	483.2	178.2	Ν	5123	384
C. Office, And Accord	09/14/1993 00:00	661.400	661.400	176.2	485.2	176.2	Ν	5123	384
a set of a galaxy or a	10/05/1993 00:00	661.400	661.400	175	486.4	175	N	5123	384
A DESCRIPTION OF THE OWNER OF	11/02/1993 00:00	661.400	661.400	172.9	488.5	172.9	N	5123	384
A A A A A A A A A A A A A A A A A A A	12/07/1993 00:00	661.400	661.400	170.2	491.2	170.2	N	5123	384
12 m	01/04/1994 00:00	661.400	661.400	168.2	493.2	168.2	Ν	5123	384

1	02/01/1994 00:00	661.400	661.400	167.5	493.9	167.5	N	5123	384
	03/01/1994 00:00	661.400	661.400	166.4	495	166.4	Ν	5123	384
l	04/05/1994 00:00	661.400	661.400	164.4	497	164.4	N	5123	384
	05/03/1994 00:00	661.400	661.400	162.8	498.6	162.8	Ν	5123	384
l	06/01/1994 00:00	661.400	661.400	161.1	500.3	161.1	N	5123	384
	07/13/1994 00:00	661.400	661.400	160.8	500.6	160.8	N	5123	384
10 10 ALAS	08/11/1994 00:00	661.400	661.400	160.8	500.6	160.8	N	5123	384
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	09/13/1994 00:00	661.400	661.400	162.5	498.9	162.5	N	5123	384
0.100 m (0.4	10/20/1994 00:00	661.400	661.400	164.5	496.9	164.5	Ν	5123	384
10 10	12/06/1994 00:00	661.400	661.400	164.7	496.7	164.7	N	5123	384
10000	01/18/1995 00:00	661.400	661.400	163.4	498	163.4	N	5123	384
	03/14/1995 00:00	661.400	661.400	165	496.4	165	Ν	5123	384
- 0 VIII-	04/25/1995 00:00	661.400	661.400	164.9	496.5	164.9	Ν	5123	384
	05/16/1995 00:00	661.400	661.400	162.7	498.7	162.7	Ν	5123	384
1 - 1 - N	06/06/1995 00:00	661.400	661.400	162.7	498.7	162.7	Ν	5123	384
The second se	07/11/1995 00:00	661.400	661.400	161.7	499.7	161.7	N	5123	384
ľ	08/08/1995 00:00	661.400	661.400	162.6	498.8	162.6	Ν	5123	384
	09/06/1995 00:00	661.400	661.400	162.3	499.1	162.3	Ν	5123	384
	10/03/1995 00:00	661.400	661.400	160.8	500.6	160.8	Ν	5123	384
	11/07/1995 00:00	661.400	661.400	159.4	502	159.4	Ν	5123	384
A WAS INCOME.	12/04/1995 00:00	661.400	661.400	158.2	503.2	158.2	N	5123	384
10000	01/17/1996 00:00	661.400	661.400	158.8	502.6	158.8	N	5123	384
	02/01/1996 00:00	661.400	661.400	152.8	508.6	152.8	Ν	5123	384
20-010 - 01	03/05/1996 00:00	661.400	661,400	157.9	503.5	157.9	N	5123	384
N. 5. 1. 1. 1. 1.	04/02/1996 00:00	661.400	661.400	156.5	504.9	156.5	N	5123	384
and a standard and	05/07/1996 00:00	661.400	661.400	157.2	504.2	157.2	N	5123	384
	06/18/1996 00:00	661.400	661.400	159.7	501.7	159.7	N	5123	384
	07/02/1996 00:00	661.400	661.400	163.3	498.1	163.3	Ν	5123	384
ľ	08/06/1996 00:00	661.400	661.400	163	498.4	163	Ν	5123	384
	09/18/1996 00:00	661.400	661.400	164.7	496.7	164.7	N	5123	384
10 - 1 - Marce	10/17/1996 00:00	661.400	661.400	166.9	494.5	166.9	Ν	5123	384
	11/26/1996 00:00	661.400	661.400	167.7	493.7	167.7	Ν	5123	384
	12/31/1996 00:00	661.400	661.400	167.5	493.9	167.5	N	5123	384
	01/28/1997 00:00	661.400	661.400	166.6	494.8	166.6	Ν	5123	384
	02/04/1997 00:00	661.400	661.400	166.4	495	166.4	Ν	5123	384
ŀ	03/04/1997 00:00	661.400	661.400	166	495.4	166	Ν	5123	384
	04/01/1997 00:00	661.400	661.400	165.9	495.5	165.9	Ν	5123	384
	05/27/1997 00:00	661.400	661.400	167.6	493.8	167.6	Ν	5123	384
A SUDDANCE .	06/11/1997 00:00	661.400	661.400	168	493.4	168	N	5123	384
or the Avenue of	07/09/1997 00:00	661.400	661.400	169.5	491.9	169.5	N	5123	384
	08/20/1997 00:00	661.400	661.400	176.2	485.2	176.2	N	5123	384
A HAND	09/05/1997 00:00	661.400	661.400	172	489.4	172	N	5123	384
and address of the	10/22/1997 00:00	661.400	661.400	173.5	487.9	173.5	N	5123	384
	11/26/1997 00:00	661.400	661.400	174.7	486.7	174.7	N	5123	384
A	12/10/1997 00:00	661,400	661.400	175.4	486	175.4	N	5123	384
Northeast North	01/14/1998 00:00	661.400	661.400	175.8	485.6	175.8	N	5123	384
and an other	02/04/1998 00:00	661.400	661.400	176.6	484.8	176.6	N	5123	384
a a ser a service	03/04/1998 00:00	661.400	661.400	177.7	483.7	177.7	N	5123	384
	04/15/1998 00:00	661.400	661.400	176.1	485.3	176.1	Ν	5123	384
144									

I	05/21/1998 00:00	661.400	661.400	165.6	495.8	165.6		Ν	5123	384
	06/01/1998 00:00	661.400	661.400	174.8	486.6	174.8		Ν	5123	384
	07/01/1998 00:00	661.400	661.400	172.5	488.9	172.5		N	5123	384
	08/01/1998 00:00	661.400	661.400	171.9	489.5	171.9		Ν	5123	384
	10/01/1998 00:00	661.400	661.400	170.6	490.8	170.6		N	5123	384
10.00	11/01/1998 00:00	661.400	661.400	169.1	492.3	169.1		N	5123	384
and a statement	12/01/1998 00:00	661.400	661.400	169.1	492.3	169.1		N	5123	384
	01/01/1999 00:00	661,400	661.400	168.5	492.9	168.5		Ν	5123	384
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	02/01/1999 00:00	661.400	661.400	169.5	491.9	169.5		N	5123	384
110 A 10	03/01/1999 00:00	661.400	661.400	169.8	491.6	169.8		Ν	5123	384
a strant and	04/01/1999 00:00	661.400	661.400	172.7	488.7	172.7		Ν	5123	384
	05/01/1999 00:00	661.400	661.400	174.8	486.6	174.8		N	5123	384
A COLORED	06/01/1999 00:00	661.400	661.400	177.2	484.2	177.2		Ν	5123	384
	07/01/1999 00:00	661.400	661.400	179.6	481.8	179.6		Ν	5123	384
100	08/01/1999 00:00	661,400	661.400	179.9	481.5	179.9		Ν	5123	384
1	09/01/1999 00:00	661.400	661.400	183.6	477.8	183.6		N	5123	384
	10/01/1999 00:00	661.400	661.400	185.3	476.1	185.3		N	5123	384
41.44	11/01/1999 00:00	661.400	661.400	186.6	474.8	186.6		N	5123	384
	12/01/1999 00:00	661.400	661.400	187.1	474.3	187.1		N	5123	384
	01/01/2000 00:00	661.400	661.400	188.4	473	188.4		N	5123	384
	02/01/2000 00:00	661.400	661.400	189.1	472.3	189.1		N	5123	384
A test	04/01/2000 00:00	661.400	661.400	190	471.4	190		Ν	5123	384
10.000	05/05/2006 00:00	661.400	661.400	186.3	475.1	186.3		N	5123	384
	10/27/2006 00:00	661.400	661.400	183.9	477.5	183.9		N	5123	384
	01/20/2007 00:00	661.400	661.400	187.1	474.3	187.1		N	5123	384
	09/18/2009 00:00	661.400	661.400	188.2	473.2	188.2		N	5123	384
	10/06/2009 00:00	661.400	661.400	189.7	471.7	189.7		Ν	5123	384
	12/03/2009 00:00	661.400	661.400	190.1	471.3	190.1		Ν	5123	384
	12/03/2009 00:00	661.400	661.400	190.1	471.3	190.1		Ν	5123	384
	01/05/2010 00:00	661.400	661.400	189	472.4	189		Ν	5123	384
1	06/13/2011 00:00	661.400	661.400	182.8	478.6	182.8		Y	5123	384
	10/01/2011 00:00	661.400	661.400				N-9	Y	5123	384
	06/13/2012 00:00	661.400	661.400	182.8	478.6	182.8		Y	5123	384
	06/13/2012 00:00	661.400	661.400	182.8	478.6	182.8		Ν	5123	384
	10/15/2012 00:00	661.400	661.400	174.7	486.7	174.7		Y	5123	384
	10/15/2012 00:00	661.400	661.400	174.7	486.7	174.7		N	5123	384
	03/01/2013 00:00	661.400	661.400				N-9	Y	5123	384
1000	10/02/2013 00:00	661.400	661.400	174.3	487.1	174.3		Ν	5123	384
A ALCONOMY - THE	10/02/2013 00:00	661.400	661.400	174.3	487.1	174.3		Y	5123	384
1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	12/09/2013 00:00	661.400	661.400	174.3	487.1	174.3		Y	5123	384
TV	03/13/2014 00:00	661.400	661.400	175.23	486.17	175.23		Y	5123	384
A VIII A V VIII	03/13/2014 00:00	661.400	661.400	175.23	486.17	175.23		Ν	5123	384
Contraction of the	10/15/2014 00:00	661.400	661.400	180.52	480.88	180.52		N	5123	384
	10/15/2014 00:00	661.400	661.400	180.52	480.88	180.52		Y	5123	384
	03/18/2015 11:25	661.400	661.400	183.6	477.8	183.6		Ν	5123	384
	03/18/2015 11:25	661.400	661.400	183.6	477.8	183.6		Y	5123	384
1.1.1	10/08/2015 12:22	661.400	661,400	189.05	472.35	189.05		Y	5123	384
10.000	03/03/2016 00:00	661.400	661.400	191.34	470.06	191.34		Y	5123	384
Contract Contract	10/13/2016 09:40	661.400	661.400	191.9	469.5	191.9		Y	5123	384

Il elevation and	tooth moo	uramante	ara in faat	The vertic	al datum for recent	measurements is NAV	089	a
11/07/2019 00:00	661.400	661.400	191.7	469.7	191.7	Y	5123	38
04/09/2019 00:00	661.400	661.400	193.98	467.42	193.98	Y	5123	384
10/03/2018 00:00	661.400	661.400	194.21	467.19	194.21	Y	5123	384
03/15/2018 00:00	661.400	661.400	193,58	467.82	193.58	Y	5123	38-
10/03/2017 00:00	661.400	661.400	255.3	406.1	255.3	Y	5171	384
04/10/2017 09:20	661.400	661.400	198.87	462.53	198.87	Y	5123	38

Perform a New Well Search

# EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 20195

(6 PAGES)

#### Krismar Construction Company, Inc.

Date: 09/01/11 Elevation: 688.0'

Method: 8-inch diameter Hollow Stem Auger

File No. 20195

km	-			n	mage	Decuteday
Sample	Blows	Moisture	Dry Density	Depth in	USCS Class.	Description Surface Conditions: Asphalt
Depth ft.	per ft.	content %	p.e.f.	feet 0	Class.	4-inch Asphalt, No Base
1	12	4.5	105.3	- 1 - 2		FILL: Silty Sand to Sand, dark to yellowish brown, slightly moist, medium dense, fine grained
3	9	5.2	94.3	- 3 -	SP	Sand, yellowish brown, slightly moist, medium dense, fine grained
5	9	6.8	104.4	4 - 5 - 6	SM/SP	Silty Sand to Sand, dark to yellowish brown, slightly moist, medium dense, fine grained
7	22	2.8	115.7	- 7 8	SP	Sand, yellowish brown, slightly moist, dense, fine grained
10	19	2.0	102.6	9 10 11		Sand, yellowish brown to brown, slightly moist, medium dense to dense, fine to medium grained
15	33	2.1	108.5	12 13 14 15 16 17 18 19		
20	57	2.1	112.8	19 - 20 - 21 22	SP/SW	Sand, yellowish brown, slightly moist, very dense, fine to coarse grained, with gravel Total depth: 20 feet; No Water; Fill to 2 feet
				22 23 24 25		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted

#### Krismar Construction Company, Inc.

Date: 09/01/11 Elev

Elevation: 684.75'

File No. 20195

Method: 8-inch diameter Hollow Stem Auger

km						Without 8-men diameter Honow Stem Auger
Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description Surface Conditions: Asphalt
Depth ft.	per ft.	content %	p.c.f.	feet 0	Class.	Surface Conditions: Asphalt
				-		
		Y		1 -		FILL: Silty Sand to Sand, yellowish brown, slightly moist, medium
				2-		dense, fine grained
2.5	27	1.8	108.6	-		
				3	SP	Sand, yellow to olive brown, slightly moist, medium dense to dense,
				-		fine grained
				4-		
5	12	2.9	SPT	5		
				-		
				6		
				7		
7.5	28	2.3	116.2	-		
				8		
'n				- 9		
				-		
10	20	2.7	SPT	10		
				- 11		
			110.0	12		
12.5	28	4.0	118.2	-	CR ((O))	
				13	SWISP	Silty Sand to Sand, dark to yellowish brown, slightly moist, dense, fine grained
				14		nna P. mara
				-		
15	24	2.8	SPT	15	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained,
				16	51	occasional cobble
				-		
195		1.8	170.0	17		
17.5	77 50/5"	1'9	129.9	- 18	SP/SW	Sand to Gravelly Sand, yellowish brown, slightly moist, very dense,
				-		fine grained
		*		19		
20	34	2.8	SPT	20		
20	34	4.0	SIL	-	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained
				21		
22.5	49	2.9	114.2	22 -		
~~~~				23		Sand, yellow to grayish brown, slightly moist, dense, occasional
				-		gravel
				24		
25	22	3.2	SPT	25		
				-		

#### Krismar Construction Company, Inc.

File No.	20195
km	

km Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class,	· · · · · · · · · · · · · · · · · · ·
				26 27		
27.5	38	11.7	112.0	28		
30	28	3.1	SPT	30 31		
32.5	47 50/3"	2.5	122.9	32 33		
35	29	2.6	SPT	34 — 35 — 36 —		24
37.5	78	1.9	113.3	- 37 38		
40	67	2.1	SPT	39 - 40 - 41	SP/SW	Sand, yellow to grayish brown, slightly moist, very dense, fine to coarse grained, occasional gravel
42.5	66 50/3"	1.9	113.9	42 43		
45	52	1.7	SPT	44 - 45 46		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop
47.5	24 50/6"	2.6	114.4	- 47 - 48 - 49	SP	Modified California Sampler used unless otherwise noted Sand, yellow to grayish brown, slightly moist, very dense, fine grained
50	59	3.1	SPT	49 50 -		Total depth: 50 feet; No Water; Fill to 2½ feet

Krismar Construction Company, Inc.

Date: 09/01/11

Elevation: 683.50'

File No. 20195

Method: 8-inch diameter Hollow Stem Auger

Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class.	Surface Conditions: Asphalt
				0		4-Inch Asphalt, No Base
		24	100.0	-		FILL: Silty Sand, dark to yellowish brown, slightly moist, dense,
1	33	3.4	106.8	1		fine grained
				2		
	. 1			-	SP	Sand, yellow to grayish brown, slightly moist, dense, fine grained
3	24	3.5	107.5	3-		
				-		
				4		
5	17	4.9	103.2	5-		
5	1/	4.7	103.2	-		
		2 <sup>1</sup>		6		
				-		
7	33	3.5	111.0	7		
				-		Sand, yellowish brown, slightly moist, dense, fine to medium grained
				8		
				9		
				-		
10	36	5.7	108.0	10		
				-		
				11		
				- 12		
				-		
				13		
				-		
				14		
15	28	7.1	109.8	15 -		
12	40	/.1	102.0	15-	SM/SP	Silty Sand to Sand, dark to yellowish brown, slightly moist, dense,
				16		fine grained
				-		
			1	17		
				- 10		
				18		
				19		
				-		
20	84	1.8	127.1	20	SP	Sand, yellowish brown, slightly moist, very dense, fine grained
				-		m. (-1 1 - 1) - 20 5 - (
				21		Total depth: 20 feet No Water
				22		Fill to 2 feet
				-		
				23		NOTE: The stratification lines represent the approximate
				-		boundary between earth types; the transition may be gradual
				24		Head 9 inch diamater Hallow Oten Auron
				25 -		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop
				-		Modified California Sampler used unless otherwise noted
			-			

GEOTECHNOLOGIES, ING.

#### Krismar Construction Company, Inc.

Date: 09/15/11

Elevation: 685.75'

File No. 20195 km

Method: 8-inch diameter Hollow Stem Auger

Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class.	Surface Conditions: Asphalt
				0		3-inch Asphalt, No Base FLLL: Silty Sand, dark brown, slightly moist, medium dense, tine
				1		grained
				-		Pranton
2	11	2.2	100.2	2		
				-	SP	Sand, grayish brown, slightly moist, medium dense, fine grained
				3		
4	15	10.8	106.0	4		
-	15	10.0		-	SM/SP	Silty Sand to Sand, dark to grayish brown, moist, medium dense,
				5		fine grained
				-		
				6		
7	21	1.8	101.2	7-		
'	~1	110		-	SP	Sand, gray to light gray, slightly moist, dense, fine grained
				8		
				-		
		1		9		
10	28	1.3	111.2	10		
10	20	1.0				
				11		
1				-		
				12		
		(, ()		13		
				-		
				14		
			110.0	-		
15	32	1.9	112.6	15		Sand, light brown, slightly moist, dense, fine grained
				16		Duridi refit bi origi oregitary monori anna gi umba
				-		
				17		
				- 18		
				10		
				19		
				-		
20	44	2.9	104.3	20		
				- 21		Total depth: 20 feet No Water
				21		Fill to 2 feet
				22		
				-		
				23		NOTE: The stratification lines represent the approximate
				-		boundary between earth types; the transition may be gradual
				24		Used 8-inch diameter Hollow-Stem Auger
1				25		140-lb. Slide Hammer, 30-inch drop
				-		Modified California Sampler used unless otherwise noted

#### Krismar Construction Company, Inc.

Date: 09/15/11

Elevation: 685.25'

File No. 20195

Method: 8-inch diameter Hollow Stem Auger

cm Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class.	Surface Conditions: Asphalt
				0-		31/2-inch Asphalt, No Base
1	15	11.4	103.3	- 1		FILL: Silty Sand, dark brown, moist, medium dense, fine grained
-				-		
				2	SP	Sand, dark brown, slightly moist, medium dense, fine grained
3	17	2.0	105.8	3	Sr	Sand, dark brown, snghuy moist, meutum dense, me grameu
		0		-	1	
				4		
5	25	3.6	108.3	5		
					SM/SP	Silty Sand to Sand, dark to grayish brown, slightly moist, dense,
				6		fine grained
7	25	2.2	108.9	7		
		0		- 8	SP	Sand, light gray, slightly moist, dense, fine to medium grained
				-		
				9		
10	32	5.0	111.4	- 10		
10	52	540	111.1	-		
				11		
				- 12		
				-		
				13		
				14		2
15	57	10.6	113.5	15	SM/SP	Silty Sand to Sand, dark brown to grayish brown, moist, very
				16		dense, fine grained
				-		
				17		
				18		
				- 19	/	Sand, light gray to yellowish brown, slightly moist, very dense,
				-	SP	fine grained, occasional cobbles
20	78	1.4	128.8	20		The 4 L days 4 L 20 Gald
				21		Total depth: 20 feet No Water
				-		Fill to 2 feet
				22		
				23		NOTE: The stratification lines represent the approximate
				-		boundary between earth types; the transition may be gradual
				24		Used 8-inch diameter Hollow-Stem Auger
				25		140-lb. Slide Hammer, 30-inch drop
				-		Modified California Sampler used unless otherwise noted

GEOTECHNOLOGIES, INC.

# EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 18954

(**10 PAGES**)

#### Drilling Date: 07/07/05

#### Elevation: 670.10'\*

## Project: File No. 18954

#### **Krismar Construction**

\*Based on Topographic Survey provided by Client

m						*Based on Topographic Survey provided by Client
Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
Depta it.		content 70	J.C.I.	0	<u>C.1435</u> .	FILL: Silty Sand, grayish-brown, moist, medium dense, fine grained, minor gravel
2	48	11.3	113.7	2	SM	Silty Sand, grayish-brown, moist, very dense, fine grained, some
				3		gravel
5	48	6,0	106.9	5 - 6	SP	Sand, gray, slightly moist, dense, fine grained, some gravel
7	67	10.0	105.8	7 8	SM	Silty Sand, olive-brown, moist, dense, fine grained, some gravel
10	30	8.3	106.9	9 - 10		
				11 12	SM/SP	Silty Sand to Sand, grayish-brown, moist, dense, fine grained, some gravel
				13 14		
15	36	21.8	97.8	15	SP	Sand, grayish-brown, moist, dense, fine grained, some gravel
				17 17 18	SM	Silty Sand, olive-brown, moist, dense, fine grained, some gravel
20	69	2.6	114.9			
20	09	2.0	114.7	21	SW	Sand with Gravel, grayish-brown, slightly moist, very dense, find to coarse grained
				22 23 24		
25	63	6.0	109.2	25	SP	Sand, grayish-brown, slightly moist, dense, fine grained
				26 27	SM	Silty Sand, grayish-brown, slightly moist, dense, fine grained
				28		
30	50/6"	3.2	SPT	30	SP	Sand, gray, slightly moist, very dense, fine to medium grained, some gravel

#### Project: File No. 18954

n Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
a change and				- 31		
				-		
				32		
				33		
				34		
35	75/7"	3.2	128.0	35	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse
				36	5.0	grained
				37		
				38		
				39		
40	50/6"	3.4	SPT	40		
				41	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel
				42		
				43		
				- 44		
45	22	7.8	109.1	45		
45	50/5"	/.0	109.1	-	SW	Sand with Gravel, grayish-brown, slightly moist, very dense, find to coarse grained
				46		to coarse gramed
				47		
				48		
				49		
50	50/6"	4.2	SPT	50		
				51		
				52		
				53		
				54		
55	24	2.9	114.6	55	SP	Sand, gray, slightly moist, very dense, fine grained, some gravel
	50/5''			56	ər	Sand, graf, signer moise, very dense, me granicu, some graver
				57		
				58		
				- 59		
60	68	2.4	SPT	- 60		
				-	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained

#### Project: File No. 18954

#### **Krismar Construction**

Sample	Blows	Moisture	Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class.	
				61		
				62		
				-		
				63		
				64		
65	75/7"	3.3	113.8	65		
				- 66		
				67		
				-		
				68		
				69		
70	50/6"	2.2	SPT	70		
				71		abundant gravel
				72		
				-		
				73		
				74		
75	69	6.0	113.9	75	SP	Sand, grayish-brown, slightly moist, very dense, fine grained,
				76	Sr	minor gravel
				77		
				- 78		
				-		
				79	/	some cobbles
80	50/6"	4.3	SPT	80		Total depth: 80 feet
				81		No Water Fill to 2 feet
				82		Fill to 2 feet
				- 83		NOTE: The stratification lines represent the approximate
				-		boundary between earth types; the transition may be gradual
				84		For Borings 1 and 2:
				85		Used 8-inch diameter Hollow-Stem Auger 140-lb. Slide Hammer, 30-inch drop
				86		Modified California Sampler used unless otherwise noted
				87		SPT=Standard Penetration Test
				- 88		
				89		
				-		
				90		
TRATER		OGIES. I	11/2	l,		Plate A-

GEOTECHNOLOGIES, INC.

Drilling Date: 07/07/05

#### Elevation: 672.0'\*

#### Project: File No. 18954

km

Krismar Construction

\*Based on Topographic Survey provided by Client

km		-				*Based on Topographic Survey provided by Client
Sample	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
Depth lt.	perfic	content 76	p.c.i.	0	1.1433.	FILL: Silty Sand, gray, slightly moist, medium dense, fine grained
				-		
				1		
2	72	1.6	117.2	2		
				- 3	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel
				-		
				4		
5	21	2.6	114.9	5		
	50/5"			- 6		more gravel
				-		
7	26 50/4"	2.9	113.1	7		
	50/4			8		
		12		9		
			l. I	14		
10	75/6"	1.7	115.7	10	SM	Silty Sand, gray, slightly moist, very dense, fine grained, gravel
					SWI	bity sand, gray, signed inoise, for y dense, the graned, graver
				- 12		
				-		*
				13		
15	68	33.6	88.2	- 15		
15	00	33.0	00.4	-	ML	Sandy Silt, olive-brown, very moist, firm
				16		
				17		
				- 18		
				-		
		•		19		
20	75/6"	4.3	116.3	20		
				- 21	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				-		P. m.c.
				22		
				23		
				- 24		
				-		
25	22 50/3"	3.8	111.0	25		fine to medium grained
	30/3			26		
				- 27		
				-		
				28		
				29		
30	75/7"	2.1	117.9	30		
		OGIES, II		-	SP	Sand, gray, slightly moist, very dense, fine grained, minor gravel

#### Project: File No. 18954

n Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in fect	USCS Class.	Description
				- 32		
35	28	5.3	117.1	35		
30	50/4"	<i></i>	11/.1	- - 36	SM	Silty Sand, grayish-brown, slightly moist, very dense, fine grained minor gravel
				37		
				38		
40	30	3.8	111.2	- 40		
40	50/2"	5.0	111.2	40	sw	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained
				42		P. MART
				43		
				- 44		
45	22	2.3	113.8	45		
	50/5"			- 46		
				- 47		
				- 48		
				- 49		
50	68	8.4	107.1	- 50		
				51	SM	Silty Sand, olive brown, moist, very dense, fine grained
				52		
				- 53		
				- 54		
55	55	12.5	107.7	- 55		
				- 56	ML	Sandy Silt, olive-brown, moist, hard
				57		
				- 58		
				- 59		
60	19	3.1	114.4	60	011/	Sand with Group and a sightly maint and for the
	50/5"		NC.	-	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained

#### Project: File No. 18954

m Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61		
				- 62		
				- 63		
				- 64	1	
65	75/6''	3.9	112.7	- 65		
				- 66		
				67		
				68		
				- 69		
70	75/6''	4.6	111.2	- 70		some cobbles
				- 71		some connes
				72		
				73		
				74		
75	75/7"	4.5	113.3	75	SM	Silty Sand, olive-brown, slightly moist, very dense, fine grained,
1				76	511	minor gravel
				77		
				78		
				79		
80	75/7"	6.8	106.6	80	SP	Sand, olive-brown, moist, very dense, fine grained, minor gravel
				81		Total depth: 80 feet
				82		No Water Fill to 2 feet
				83		
				84		
				85 - 86		
				87		
				- 88		
				- 89		
				90		
				-		
EOTEC	CHNO	OGIES, I	C.			Plate A-

#### Drilling Date: 07/18/05

Project: File No. 18954

## **BORING LOG NUMBER 3**

#### Elevation: 668.0'\*

## Krismar Construction \*Based on Tongeraphic Survey pr

vided by Client

Blows ber ft. 4/12''	Moisture content % 2.8	Dry Density p.c.f. [19.2	Depth in feet 0 1 2 3 5 5 6	USCS Class.	Description <u>Surface Conditions: Bare Ground</u> FILL: Silty Sand to Sand, grayish-brown, moist, medium dense, fine grained, minor gravel
			0 1 2 3 4 5		FILL: Silty Sand to Sand, grayish-brown, moist, medium dense, fine grained, minor gravel
4/12''	2.8	(19.2	2 3 4 5	SW	
4/12''	2.8	[19.2	2 3 4 5	SW	
4/12''	2.8	[19.2	3 4 5	SW	
1/12''	2.8	[19.2	- 4 5 -	SW	
4/12''	2.8	(19.2	5	SW	
4/12"	2.8	[19.2	5	SW	
ł/12"	2.8	[19.2	-	SW	
					Sand with Gravel, grayish-brown, slightly moist, dense, fine to
					coarse grained
			7		
			-		
			8 -		
			9		
7/12"	6.9	103.3	10		
			-	SP	Sand, gray, slightly moist, very dense, fine grained, some gravel
			-		~
			13		
	č.		- 14		
			-		
\$/12"	3.5	111.0	-	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse
			16		grained, some cobbles and gravel, slight caving
			17		
			- 19		
			19		
5/12"	4.5	120.0	20		
			21		grayish-brown
			-		
			- 22		*
			23		
			24		
(/12)		106.7	-		
+/1Z <sup>**</sup>	4.1	100.2	-	SP	Sand, gray, slightly moist, dense, fine grained, some gravel
			26		
			27		
			28		
			-		
		100 4	-	/	Silty Cond alive brown waith some three first
			30	SM	Silty Sand, olive-brown, moist, very dense, fine grained, some cobbles and gravel
5, 5,	/12"' /12"' /12"'	/12" 3.5 /12" 4.5 /12" 4.1	/12" 3.5 111.6 /12" 4.5 120.0 /12" 4.1 106.2	/12'' $6.9$ $103.3$ $10$ $11$ $12  11$ $12  13$ $14$ $12''$ $3.5$ $111.6$ $15$ $14$ $16$ $17$ $18$ $19$ $18$ $/12''$ $4.5$ $120.0$ $20$ $/12''$ $4.5$ $120.0$ $20$ $21$ $22$ $23$ $/12''$ $4.1$ $106.2$ $25$ $26$ $27$ $28$ $29$ $29$ $29$ $29$ $30$ $$	/12''       6.9       103.3       10       SP $11$ $12  13$ $12  13$ $12''$ $3.5$ $111.6$ $15$ $SW$ $16$ $17$ $18$ $19$ $17$ $18$ $19$ $21$ $12''$ $4.5$ $120.0$ $20$ $ 21$ $23$ $23$ $23$ $24$ $21$ $23$ $24$ $24$ $24$ $21$ $22$ $23$ $24$ $24$ $21$ $22$ $23$ $24$ $24$ $21$ $22$ $23$ $24$ $24$ $24$ $21$ $22$ $23$ $24$ $27$ $28$ $29$

#### Project: File No. 18954

#### **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture confent %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
reptii ii. 1	per n.	coment 70	p.c.i.	-	Classi	
				31		
				32		
				33		
				34		
35	11/12"	3.0	107.0	35		Sand with Gravel, gray, slightly moist, very dense, fine to coarse
					SW	grained
				37		
				- 38		
				- 39		
40	12/12"	2.5	110.4	- 40		
				- 41		
				- 42		
				- 43		
				- 44		
45	12/12"	2.0	121.9	45		
40	14/12	2.0	121.9	46		
				- 47		
				-		
				48		
				49 -		
50	17/12"	2.3	113.2	50 -		Total depth: 50 feet
				51		No Water Fill to 5 feet
				52		Caving from 30 feet to 50 feet below grade
				53		For Borings 3 and 4:
				54		Used 24-inch diameter Bucket Auger Sampled with a 2 <sup>1</sup> / <sub>2</sub> diameter California
				55		Modified Split-Spoon Sampler
				56		Kelley Weights: 0 - 24' = 1590#
				57		25 - 50' = 765#
				58		
				- 59		
				- 60		
				-		

GEOTECHNOLOGIES, INC.

#### Drilling Date: 07/18/05

#### Elevation: 672.0'\*

#### Project: File No. 18954 km

#### **Krismar Construction**

\*Based on Topographic Survey provided by Client

m						*Based on Topographic Survey provided by Client
Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Bare Ground
Deptit It.	per n.	Content 76	piteti	0	Clean	FILL: Silty Sand, gray, brown, moist, medium dense, fine grained
				- 1		minor gravel, slight caving
				-		
				2		
				3		
				- 4		
-	5/12"	3.2	114.2	- 5		
5	5/12*	3.2	114.2	6	SW	Sand with Gravel, gray, slightly moist, dense, fine to coarse
	l i			6		grained
				7		
				8		
				- 9		abundant gravel
				-		
10	6/12"	9.1	116.8	10	SM	Silty Sand, olive-brown, moist, very dense, minor gravel
				11		
				12		
	i.					
				- 14	-	
15	7/12"	2.6	113.5	15		
				- 16	SW	Sand with Gravel, gray, slightly moist, very dense, fine to coarse grained, slight caving
				- 17		
				-		
				18		
				19		
20	8/12''	3.3	119.9	20		
				21		
				22		
				23		
				24		
25	8/12"	3.4	116.7	25		
				26		more gravel, slight caving
				27		
				- 1		
				28		
				29		
30	19/12"	3.0	116.2	30		more gravel
50						

#### Project: File No. 18954

#### Krismar Construction

km Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
Depti It.	per it.	content 70	press.	- 31	Cluster	
				32		
35	19/12''	3.2	117.4	- 35		
35	19/12	3.4	117.4	- 36		slight caving
				38		
				39		
40	27/12"	3.8	122.9	- 40		
				- 41		some cobbles
				42		
				- 43		
				- 44		
45	33/12"	4.5	122.5	45		
				46		slight caving
				47		
				48		
				49		
50	35/12"	4.5	122.3	50		Total depth: 50 feet
				51		No Water Fill to 5 feet
				52		Slight Caving 15 to 50 feet
				53		
				54		
				55		
				56		
				57		
				58		
				59		
				60		
0F0TF0	SHE AL	IGIES. IN	n			Plate A-4

GEOTECHNOLOGIES, INC.

# EXCAVATION LOGS FROM PREVIOUS EXPLORATION BY GEOTECHNOLOGIES, INC. FILE NO. 18771

(6 PAGES)

#### Drilling Date: 11/09/04

#### Project: File No. 18771

Sample	Blows	Moisture	· Dry Density	Depth in	USCS	Description
Depth ft.	per ft.	content %	p.c.f.	feet	Class.	Surface Conditions: Barren Ground
				0		FILL: Sand to Silty Sand, medium brown, moist, dense, fine grained
3				1		
				2		
				-		
				3	1	
				4		
5	19	3.9	116.0	5		
	50/4"			6	SW	Sand with gravel, medium brown, moist, very dense, fine to coarse grained
				-		8
				7		
		1		8		
				9		
10	21	1.4	SPT	10		
	50/4"			- 11	SP/SM	Sand to Silty Sand, medium brown, moist, very dense, fine to medium grained
				-		B
				12		
				13		
				14		*
15	44	3.9	99.8	15		
				 16	SP	Sand, medium brown, moist, dense, fine grained
				-		
				17		
				18		
				19		
20	28	7.1	SPT	20		
				21		
				-		
				22		
				23		· ·
				24		
25	45	5.8	108.8	25		
				- 26		
				27		
				-		
				28		
				29		
30	66	2.6	SPT	30		· · · · · · · · · · · · · · · · · · ·
S IN CO. NO. 10 PE	SEE BE OF H	OGIES. II	IC.			Plate A-1

## **BORING LOG NUMBER 1 (continued)**

#### Project: File No. 18771

$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in fcet	USCS Class.	Description
35       68       3.9       114.4 $33 - 34 - 33 - 34 - 33 - 34 - 33 - 34 - 33 - 34 - 33$							
35       68       3.9       114.4 $33 $					-		
35       68       3.9       114.4 $3\frac{4}{5}$ -       -					-		
35       68       3.9       114.4       35 - 36 - 37 - 38 - 39 - 39 - 39 - 39 - 39 - 39 - 39					-		
40 $50/6''$ 2.8       SPT $36 - 37 - 38 - 39 - 39 - 39 - 39 - 39 - 39 - 39$	35	68	3.9	114.4	-		
40 $506''$ 2.8 SPT $40 - 39 - 39 - 41 - 42 - 43 - 44 - 44 - 44 - 44 - 44 - 44$			*		-		cobbles
40 $50/6"$ 2.8 SPT $40 - 41 - 41 - 42 - 43 - 44 - 43 - 44 - 44 - 45 - 46 - 47 - 48 - 49 - 49 - 49 - 49 - 49 - 49 - 49$					~		
40 $50/6"$ 2.8 SPT $40-$ 41- 42- 43- 44- 44- 45 $26$ 3.1 113.6 $45-$ 50/3" 3.1 113.6 $45-$ 46- 47 48- 49- 50- 51- 51- 52- 52- 53- 54- 54- 55 $18$ 3.1 111.6 $55-$ 54- 55- 54- 55- 54- 55- 55- 54- 55- 55					1 - 3		
40 $50/6"$ 2.8 SPT 40- 41- 42- 43- 44- 44- 44- 44- 44- 44- 44					- 1		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	40	50/6"	2.8	SPT	-		
$     45  \begin{array}{c}     26 \\     50/3'' \\     50 \\     50 \\     50 \\     50 \\     50 \\     59 \\     50 \\     59 \\     59 \\     3.5 \\     59 \\     51 \\$			10010533001	2010/02/12/25	-		no cobbles
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					- 1		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					- 1		
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	45	26	3.1	113.6	45		
50 59 3.5 SPT $47$ 48 49 51 51 52 53 53 54 55 18 50/3" 3.1 111.6 55 56 56 57 58 59 58 59 -		50/3"			46		
50       59       3.5       SPT $50 - 49 - 49 - 49 - 49 - 49 - 49 - 49 - 4$							
50       59       3.5       SPT       50         51 $51$ $51$ $51$ $51$ 52 $52$ $52$ $53$ 55 $18$ $3.1$ 111.6 $55$ $56$ $56$ $56$ $56$ $57$ $53.0$ $56$ $56$ $56$ $56$ $57$ $58$ $59$ $72$ $3.0$ SPT $60$							
$55 \begin{array}{c ccccccccccccccccccccccccccccccccccc$							
$55 \begin{array}{c ccccccccccccccccccccccccccccccccccc$	50	59	3.5	SPT	- 50		
$55 \begin{array}{c ccccccccccccccccccccccccccccccccccc$					- 51		
55 $\begin{bmatrix} 18\\50/3''\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$					52		
$55 \begin{array}{c ccccccccccccccccccccccccccccccccccc$					- 53		
60 72 3.0 SPT 60					1.1		
60 72 3.0 SPT 60	55	18	3.1	111.6	55		
60 72 3.0 SPT 60		50/3"			56		
60 72 3.0 SPT 60							
60 72 3.0 SPT 60					58		
	60	72	3.0	SPT			
GEOTECHNOLOGIES, INC. Plate A	5 DC 45 45 45 45		26 /6 1 10 /6 - 10	1/0	-		Plate A-11

#### **BORING LOG NUMBER 1 (continued)**

#### Project: File No. 18771

#### **Krismar Construction**

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				- 61		
				62		
				63		
				-		
				64		
65	23 50/4"	2.4	117.7	65		
				66		
				67		
				68		
-		0.7	CDT	69		
70	73	9.3	SPT	70		
			-	71		
				72 - 73		
				74		
	10	3.9	103.8	-		
75	19 50/4''	3.9	103.8	75		fine grained
				76		
				77		
			1	78		
			0.007	79 -		fine to coarse grained
80	50/4"	2.6	SPT	80		Total depth: 80 feet
				81		No Water Fill to 5 feet
				82		Fill to 5 leet
				83		NOTE: The stratification lines represent the approximate boundary between earth types; the transition may be gradual
				84		Used 8-inch diameter Hollow-Stem Auger
				85		140-lb. Slide Hammer, 30-inch drop Modified California Sampler used unless otherwise noted
				86		SPT=Standard Penetration Test
				87 -		or restandard renetration rest
				88		
				89		
				90 -		
ENTE	HNAL	OGIES, II	10.			Plate A-J

#### Drilling Date: 11/09/04

#### Project: File No. 18771

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description Surface Conditions: Barren Ground
				0		FILL: Sand with gravel, light brown, moist, dense,
				- 1-		fine to coarse grained
				-		
				2		
				3		
				4		
5	34	16.2	107.8	- 5		
				- 6	SM	Silty Sand, brown, moist, dense, fine grained
6				-		
				7		
				8		
				9		
10	30	8.0	Disturbed	- 10		
				- 11		cobble
				-		
				12		
				13		
				14		
15	47	4.5	110.4	- 15		
10				н	SP	Sand, brown, moist, dense, fine to medium grained
				16 -		
				17		
				18		
				- 19		
20	75/3"	No R	ecovery	- 20		
20	1010			-		
				21		
				22		
				23		
				24		
25	50/2"	NoR	ecovery	- 25		
43	2014	110 10		-		
				26		
				27		
				28		
				- 29		
30	71	3.2	108.6	- 30		
20	/1	J.6	100.0	50		fine to medium grained

#### **BORING LOG NUMBER 2 (continued)**

#### Project: File No. 18771

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				- 31		
				- 32		
				- 33		
				- 34		
35	17	2.7	122.1	- 35		
	50/4"			- 36		cobbles
				37		
				- 39		
40	75	3.0	113.2	40		fine to coarse grained
<sup>o</sup>				41		
				42		
				43		
				44 -		
45	22 50/3''	6.2	112.4	45 -		fine to medium grained
				46		
				47		
				48 - 49		e
50	89	2.9	104.4	50		
50	07	7 • متر	1044	- 51		light brown, fine grained
				52		
				- 53		
				- 54		
55	22	2.7	113.3	- 55		
	50/4''			56		fine to medium grained, cobbles
				57		
				58		
				59 -		
60	21 50/3"	2.2	115.4	60 -		
ROTE		OGIES, II	10		_	Plate A-2

#### **BORING LOG NUMBER 2 (continued)**

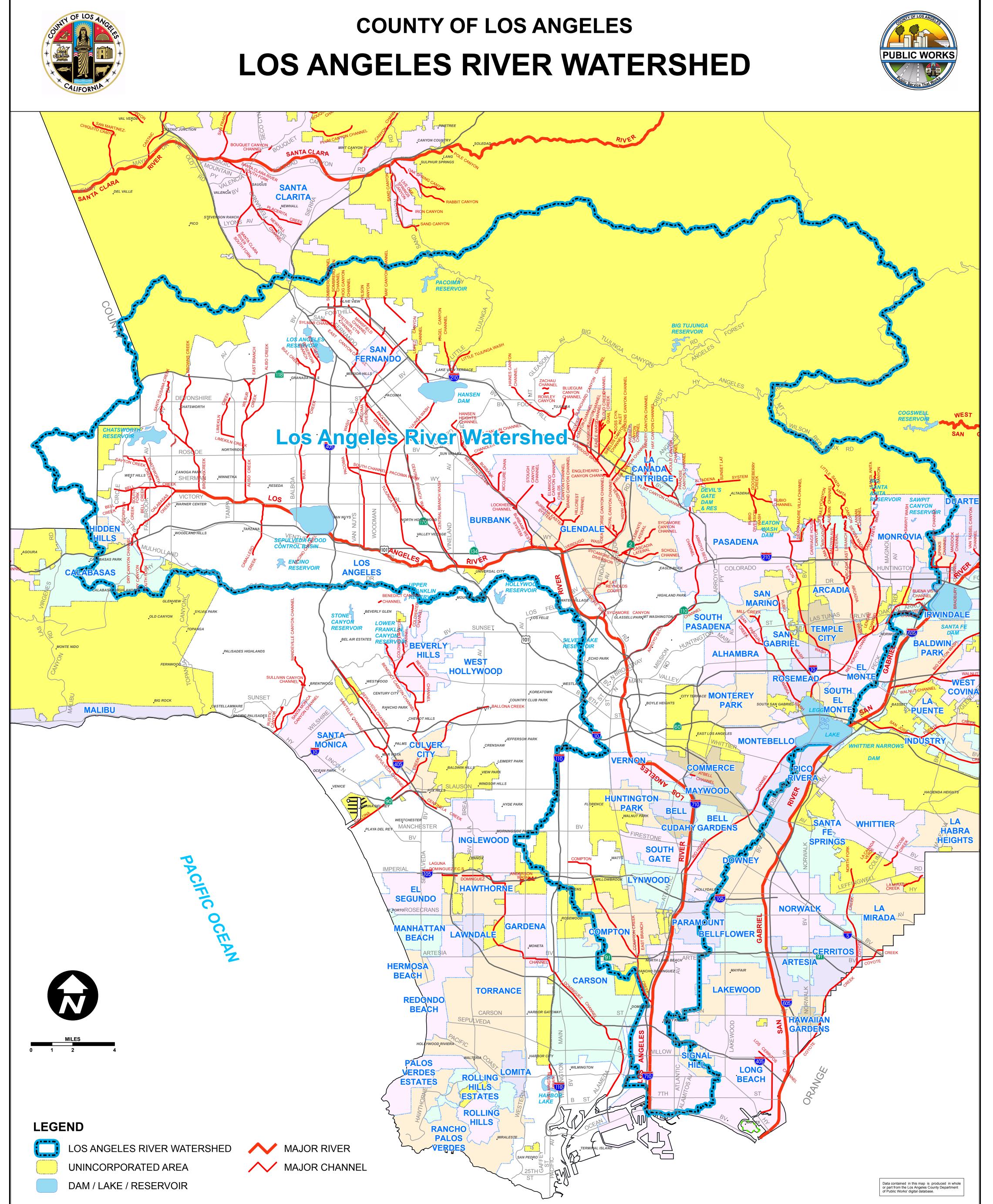
#### Project: File No. 18771

Sample Depth ft.	Blows per ft.	Moisture content %	Dry Density p.c.f.	Depth in feet	USCS Class.	Description
				61 62 63		
65	22 50/4''	3.9	101.2	64 65 66 67		fine grained, no cobbles
70	20 50/4"	5.7	102.3	- 68 69 70		
	50/4"			71 72 73 74		
75	76	3.2	102.8	75 76 77 78		fine to coarse grained
80	28 50/4''	2.9	115.8	79 80 81 82 83		fine to coarse grained Total depth: 80 feet No Water Fill to 5 feet
				84 85 86 87		
				88 89 90		,
	LINA	OGIES, I	16			Plate A

## ATTACHMENT L

## Los Angeles River Watershed Map

Fuscoe Engineering, Inc.

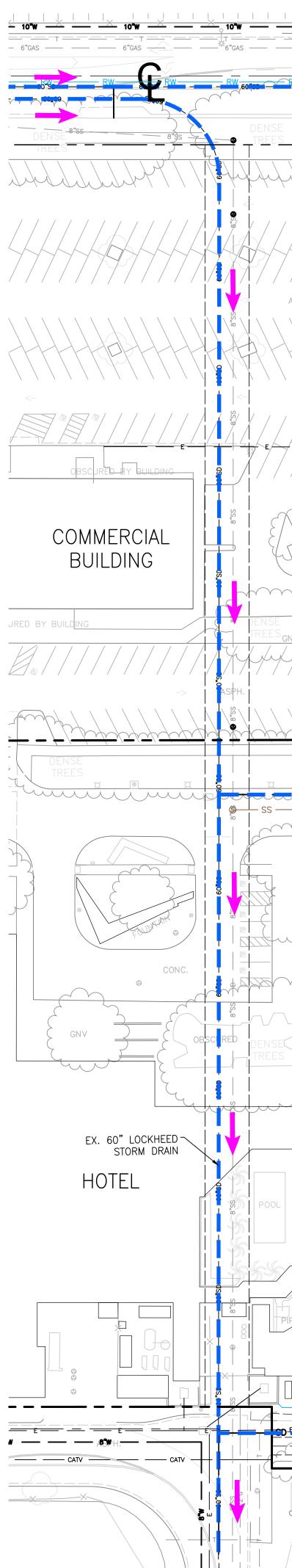




## ATTACHMENT M

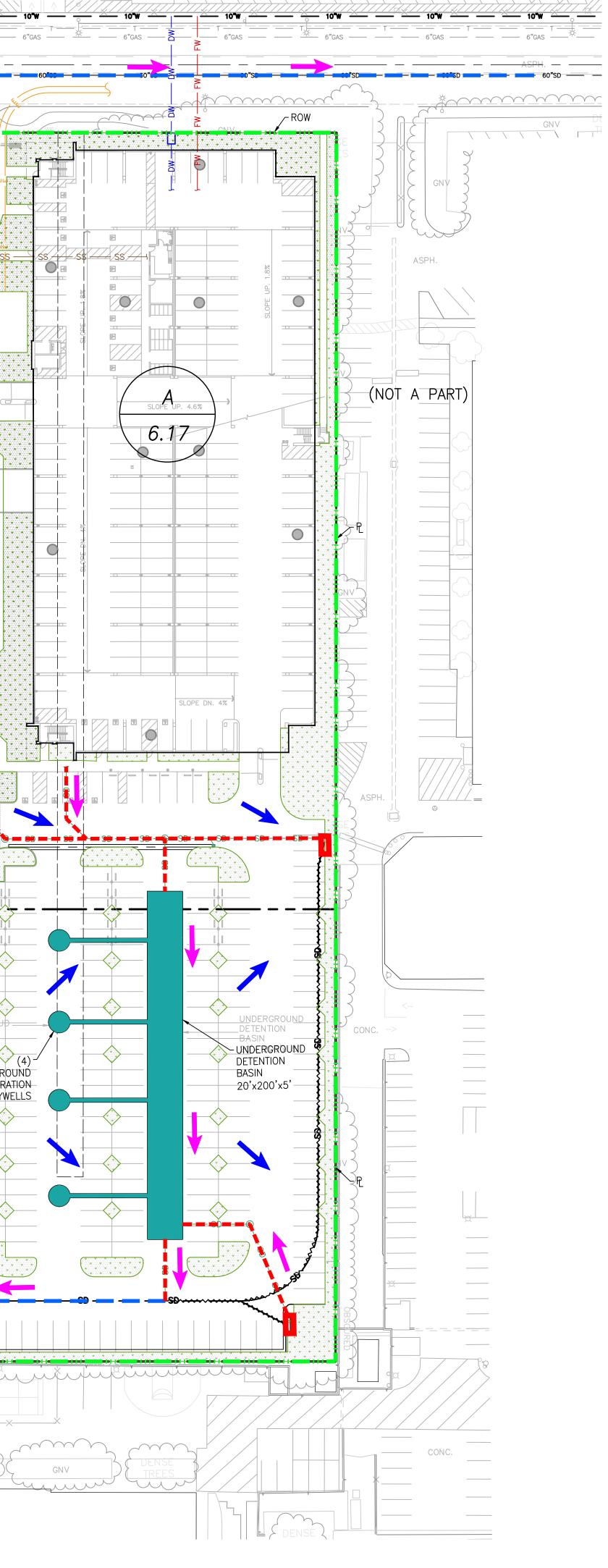
## PROPOSED HYDROLOGY EXHIBIT

Fuscoe Engineering, Inc.

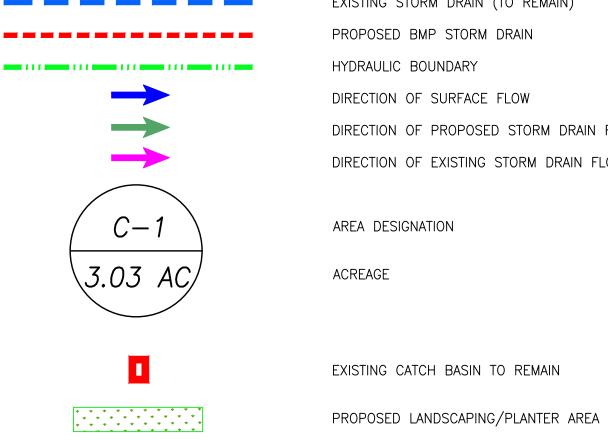


# THORTON AVE. 6"GAS \_\_\_\_\_ 6"GAS \_\_<del>??</del> \_\_\_\_ \_\_\_\_ \_\_ \_\_ \_\_ \_\_ \_\_ ROW -GNV • • • • • 9-3*/<u>↓</u>/←≾\$<u>/</u>/↓∖∖* (NOT A PART) \_\_\_\_\_ $\mathcal{M}$ ם הם הם כם ב hjulul P 201 p 6 Ó ss — ss — ss <del>— ss — ss —</del> REES GNV - mm (NOT A PART) TIL TRATION ywells UNDERGROUND CONVENTION INFILTRATION DRYWELLS CENTER EX. 30" STORM DRAIN munt Jupply many fully \_\_\_\_ W LUN- $\square$ GNV 5 GNV have the ment have have

PROPOSED CONDITION HYDROLOGY DUAL BRAND HOTEL BURBANK, CA 7/31/2023



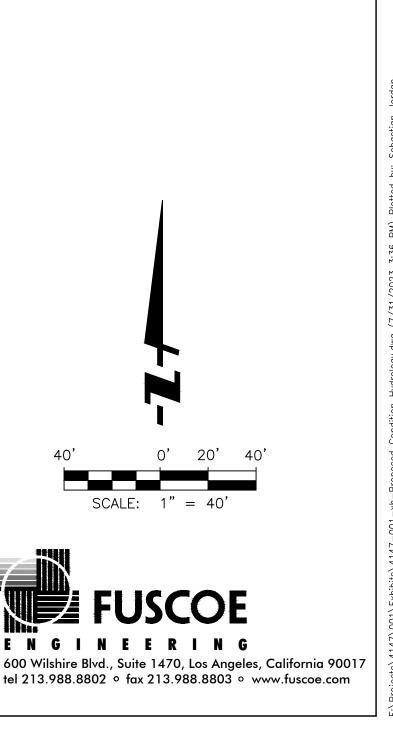
# LEGEND



# NOTES:

ONSITE STORM DRAIN INFRASTRUCTURE TO BE FIELD VERIFIED.

	F	ROPOSED CONDITI	ON STORM EVENT	S	
DRAINAGE AREA	AREA (ACRES)	PLANTER AREA (ACRES)	% IMPERVIOUSNESS	Q10(cfs)	Q25(cfs)
A-1	6.17	0.94	85	9.54	12.87



# EXISTING CATCH BASINS WILL HAVE PROPOSED PIPING ROUTED TO PROPOSED BMP LOCATIONS.

SCALE: 1" = 40

ENGINEERING

0' 20' 40'

POSED BMP STORM DRAIN
RAULIC BOUNDARY
ECTION OF SURFACE FLOW
ECTION OF PROPOSED STORM DRAIN FLOW
ECTION OF EXISTING STORM DRAIN FLOW
A DESIGNATION

EXISTING STORM DRAIN (TO REMAIN)

## ATTACHMENT N

## ALTA BY TAIT

## LEGAL DESCRIPTION

PER COMMONWEALTH LAND TITLE INSURANCE COMPANY, POLICY/ FILE NO. 08011267, DATED SEPTEMBER 19, 2014:

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS: PARCEL A:

PARCEL 1 OF PARCEL MAP NO. 24868, IN THE CITY OF BURBANK, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS SHOWN ON MAP FILED IN BOOK 279 PAGES 84 TO 86 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY. PARCEL B:

NON-EXCLUSIVE EASEMENTS OVER PARCEL 2 OF THE ABOVE REFERENCED PARCEL MAP SET FORTH IN RECIPROCAL PARKING AND MAINTENANCE AGREEMENT ("RECIPROCAL AGREEMENT") RECORDED DECEMBER 24, 1997 AS INSTRUMENT NO. 97-2019758 FOR PEDESTRIAN, VEHICULAR INGRESS AND EGRESS AND PARKING ON THE TERMS AND CONDITIONS SET FORTH THEREIN.

## EASEMENTS

> ITEMS SHOWN HEREON. NUMBERED ACCORDING TO THE ABOVE REFERENCED PRELIMINARY TITLE REPORT.

- A-B PROPERTY TAXES
- C-D SUPPLEMENTAL TAXES E THE LIEN OF SUPPLEMENTAL TAXES, IF ANY
- WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.
- (2) AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA TELEPHONE COMPANY FOR PUBLIC UTILITIES PURPOSES RECORDED IN BOOK 18085, PAGE 11, O.R.
- 3 AN EASEMENT IN FAVOR OF SOUTHERN CALIFORNIA TELEPHONE COMPANY FOR AERIAL AND UNDERGROUND TELEPHONE, TELEGRAPH AND COMMUNICATION STRUCTURES PURPOSES RECORDED MARCH 28, 1944 AS INSTRUMENT NO. 1608. IN BOOK 20800, PAGE 152, O.R. (NOT PLOTTABLE. THE EXACT LOCATION COULD NOT BE DETERMINED FROM RECORD)
- THE FACT THAT SAID LAND IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY, CITY OF BURBANK RECORDED DECEMBER 29, 1970, AS INSTRUMENT NO. 3044 AND RECORDED DECEMBER 29, 1970, AS INSTRUMENT NO. 3045, O.R. (BLANKET OVER PTR PARCELS A AND B)
- (5) AN EASEMENT FOR PUBLIC UTILITY, STORM DRAIN AND SEWER PURPOSES RECORDED NOVEMBER 7, 1980, AS INSTRUMENT NO. 80-1124311, O.R. AND RECORDED NOVEMBER 10, 1980, AS INSTRUMENT NO. 80-1130139, O.R.
- 6 AN EASEMENT IN FAVOR OF THE CITY OF BURBANK FOR UTILITY PURPOSES RECORDED NOVEMBER 8, 1990, AS INSTRUMENT NO. 90-1884686, O.R. AND RECORDED NOVEMBER 10, 1980, AS INSTRUMENT NO. 80-1130139, O.R.
- T EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS SET FORTH IN A RECIPROCAL PARKING AND MAINTENANCE AGREEMENT RECORDED DECEMBER 24, 1997, AS INSTRUMENT NO. 97–2019758, O.R. FOR PEDESTRIAN AND VEHICULAR INGRESS TO AND EGRESS FROM THE "OFFICE PARCEL" AS DEFINED THEREIN TO AND FROM ALL STREETS AND ROADS ABUTTING THE "HOTEL PARCEL", INCLUDING BUT LIMITED TO, INGRESS AND EGRESS FOR DELIVERY AND SERVICE TRUCKS AND VEHICLES OVER "DRIVEWAYS" AS DEFINED THEREIN FOR PARKING AND VEHICULAR AND PEDESTRIAN USE INCIDENTAL THERETO IN "PARKING AREAS" OF THE "HOTEL PARCEL" AS SAID TERMS ARE DEFINED THEREIN, AS RESERVED IN DEED RECORDED FEBRUARY 2, 1998, AS INSTRUMENT NO. 98-165685, O.R. (BLANKET OVER PARCELS 1 AND 2 OF PARCEL MAP NO. 24868, P.M.B. 279 PAGES 84 TO 86)
- (8) AN EASEMENT FOR PUBLIC UTILITIES PURPOSES, AS SHOWN IN PARCEL MAP NO. 24868 FILED IN BOOK 279, PAGES 84 TO 86, INCLUSIVE OF PARCEL MAPS. DISPOSITION AND DEVELOPMENT AGREEMENT BETWEEN THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK AND THE CENTER AT BURBANK AIRPORT, A GENERAL PARTNERSHIP RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131928, O.R. AS AMENDED BY SUPPLEMENTAL AGREEMENT RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131932 OF O.R., SECOND IMPLEMENTATION AGREEMENT RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80–1131930, O.R., THIRD IMPLEMENTATION AGREEMENT RECORDED NOVEMBER 12, 1980 AS INSTRUMENT NO. 80–1131931, OF O.R. AND MEMORANDUM OF UNDERSTANDING RECORDED NOVEMBER 12, 1980, AS INSTRUMENT NO. 80-1131929, O.R. A CERTIFICATE OF COMPLETION OF CONSTRUCTION EXECUTED BY THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK, RECORDED DECEMBER 15, 1983, AS INSTRUMENT NO. 83-1487284, O.R. A "CERTIFICATE OF COMPLETION IS MADE BY THE REDEVELOPMENT AGENCY OF THE CITY OF BURBANK, A PUBLIC BODY, CORPORATE AND POLITIC IN FAVOR OF STRATEGIC HOTEL CAPITAL, INCORPORATED, A DELAWARE CORPORATION, DATED AS OF JANUARY 30, 2004, AND RECORDED FEBRUARY 3, 2004, AS INSTRUMENT NO. 04-0237887 AND THE
- TERMS AND CONDITIONS CONTAINED THEREIN." 10 ANY RIGHTS, INTEREST, OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING FACTS SHOWN ON A SURVEY PLAT ENTITLED ALTA/ACSM LAND TITLE SURVEY DATED MAY 27, 2007, LAST REVISED SEPTEMBER 14, 2012, PREPARED BY TAIT & ASSOCIATES WITH JOB NO. SP6608:
- A. THE CONVENTION CENTER BUILDING EXTENDS ONTO THE EASEMENT RECORDED IN BOOK 18055 PAGE 11, O.R. B. AN 8-STORY BUILDING EXTENDS ONTO THE EASEMENT RECORDED NOVEMBER 8, 1990 AS INSTRUMENT NO. 90-1884686, O.R.
- C. A MEANDERING SIDEWALK ALONG THE NORTHERLY LINE EXTENDS ON THE LAND IN TWO PLACES.
- AN UNRECORDED AGREEMENT WITH RESPECT TO SITE IMPROVEMENTS ENTERED INTO AS OF MAY 1, 2008, BY AND BETWEEN PHF II BURBANK LLC, A DELAWARE LIMITED LIABILITY COMPANY AND UNILEV MANAGEMENT CORP., A TEXAS CORPORATION, UPON AND SUBJECT TO ALL OF THE TERMS AND CONDITIONS THEREIN SET FORTH.
- 12 A DEED OF TRUST RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880375, O.R.
- 13 AN ASSIGNMENT OF ALL THE MONEYS DUE, OR TO BECOME DUE AS RENTAL, AS ADDITIONAL SECURITY FOR THE OBLIGATIONS SECURED BY DEED OF TRUST RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880375 O.R., ASSIGNED TO MASSACHUSETTS MUTUAL LIFE INSURANCE COMPANY RECORDED DECEMBER 7 2012 AS INSTRUMENT NO. 20121880376, O.R.
- 14 MATTERS CONTAINED IN A DOCUMENT ENTITLED "SUBORDINATION, ASSIGNMENT, NONDISTURBANCE AND ATTORNMENT AGREEMENT (HOTEL MANAGEMENT AGREEMENT)" RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880377,
- 15 A FINANCING STATEMENT RECORDED DECEMBER 7, 2012 AS INSTRUMENT NO. 20121880378, O.R.
- 16 THE MATTERS CONTAINED IN A DOCUMENT ENTITLED "MEMORANDUM OF RIGHT OF FIRST REFUSAL" RECORDED APRIL 18, 2013 AS INSTRUMENT NO. 20130582069,
- 17 MATTERS WHICH MAY BE DISCLOSED BY AN INSPECTION AND/OR BY A CORRECT ALTA/ACSM LAND TITLE SURVEY OF SAID LAND THAT IS SATISFACTORY TO THE TITLE COMPANY, AND/OR BY INQUIRY OF THE PARTIES IN POSSESSION THEREOF.
- 18 ANY RIGHTS OF THE PARTIES IN POSSESSION OF A PORTION OF, OR ALL OF, SAID LAND, WHICH RIGHTS ARE NOT DISCLOSED BY THE PUBLIC RECORDS.
- 19 ANY EASEMENTS NOT DISCLOSED BY THE PUBLIC RECORDS AS TO MATTERS AFFECTING TITLE TO REAL PROPERTY, WHETHER OR NOT SAID EASEMENTS ARE
- VISIBLE AND APPARENT. 20 DISCREPANCIES, CONFLICTS IN BOUNDARY LINES, SHORTAGE IN AREA, ENCROACHMENTS, OR ANY OTHER MATTERS WHICH A CORRECT SURVEY WOULD
- DISCLOSE AND WHICH ARE NOT SHOWN BY THE PUBLIC RECORDS. DEFECTS, LIENS, ENCUMBRANCES, ADVERSE CLAIMS OR OTHER MATTERS, IF ANY, CREATED, FIRST APPEARING IN THE PUBLIC RECORDS OR ATTACHING SUBSEQUENT TO THE EFFECTIVE DATE HEREOF BUT PRIOR TO THE DATE THE PROPOSED INSURED ACQUIRES FOR VALUE OF RECORD THE ESTATE OR INTEREST OR MORTGAGE THEREON COVERED BY THIS COMMITMENT.

# UTILITY PURVEYORS

SC GAS - CHATSWORTH

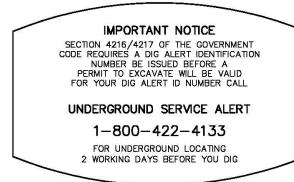
CHATSWORTH, CA 91311

TEL: (818) 701-3319 FAX: (818) 701-3380

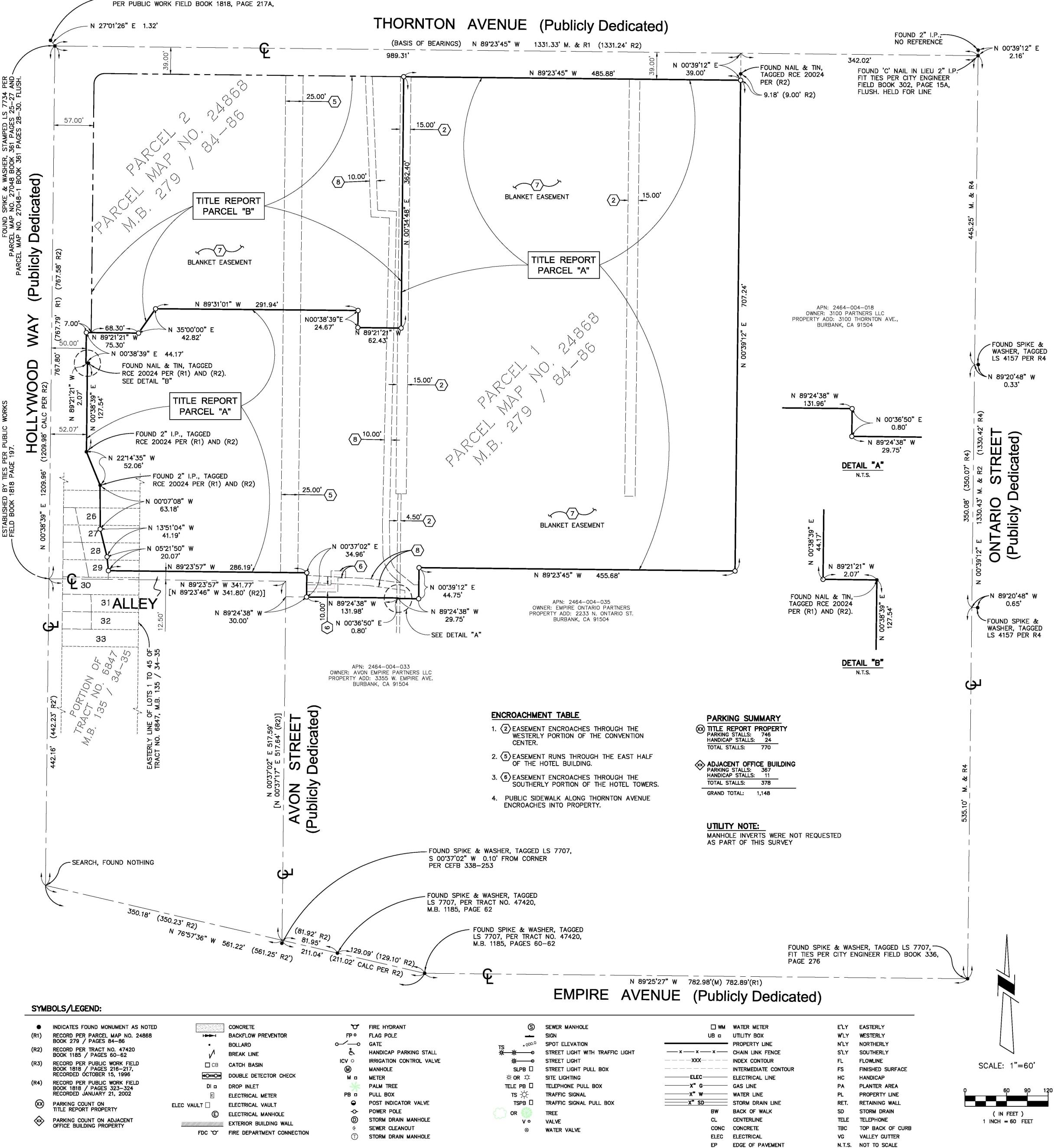
ATTN: ED HALE

AT&T	CLEAR CHANNEL
271 NORTH CAMELO AVENUE	ATTN: KEVIN KOCIC
PASADENA, CA 91107-3641	TEL: (310) 755-7299
ATTN: ARMAND DABUET	FAX: (310) 755-7347
TEL: (626) 578-3679	SPRINT
QWEST	3068 KILGORE ROAD,
700 W. MINERAL AVENUE, NEJ31.2	MAIL STOP CARACF0203-21
DENVER, CO 80202	RANCHO CORDOVA, CA 956
ATTN: MIKE GARRISON	ATTN: TABOR LAKY
TEL: (714) 666-8016	TEL: (949) 225-2931
FAX: (714) 666-8036	FAX: (949) 225-2950
METROMEDIA FIBER NETWORK 7905 S. 196TH STREET KENT, WA 98032–1122 ATTN: ADOLFO GUTIERREZ TEL: (714) 236–8502 FAX: (714) 821–4768	AT&T ATTN: MARY RAMOS TEL: (626) 578–3701 FAX: (626) 356–0954 CHARTER

ATTN: JIM REICK TEL: (818) 847-5013 9400 OAKDALE AVENUE, ML 9331 FAX: (818) 847-5004

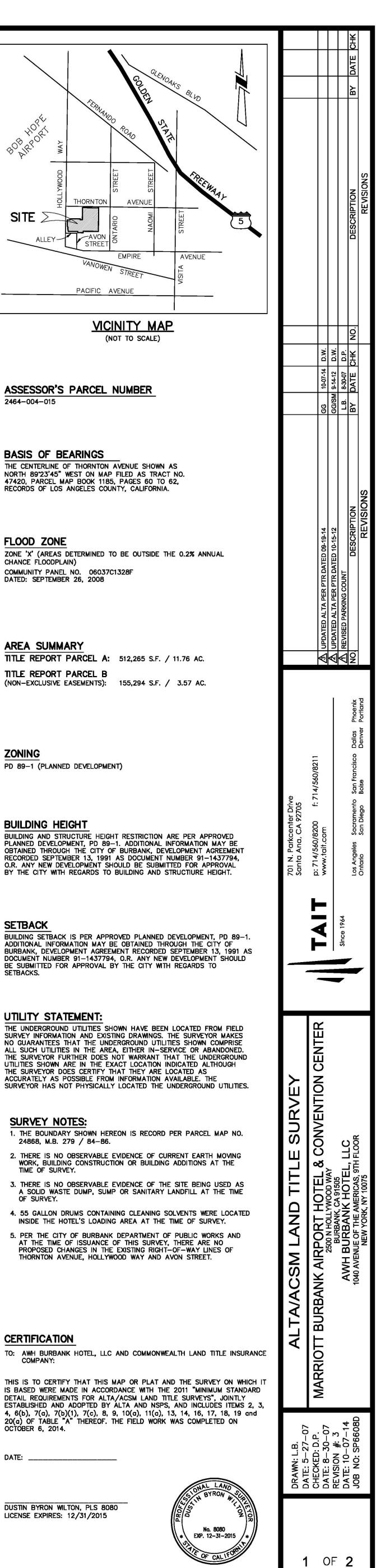


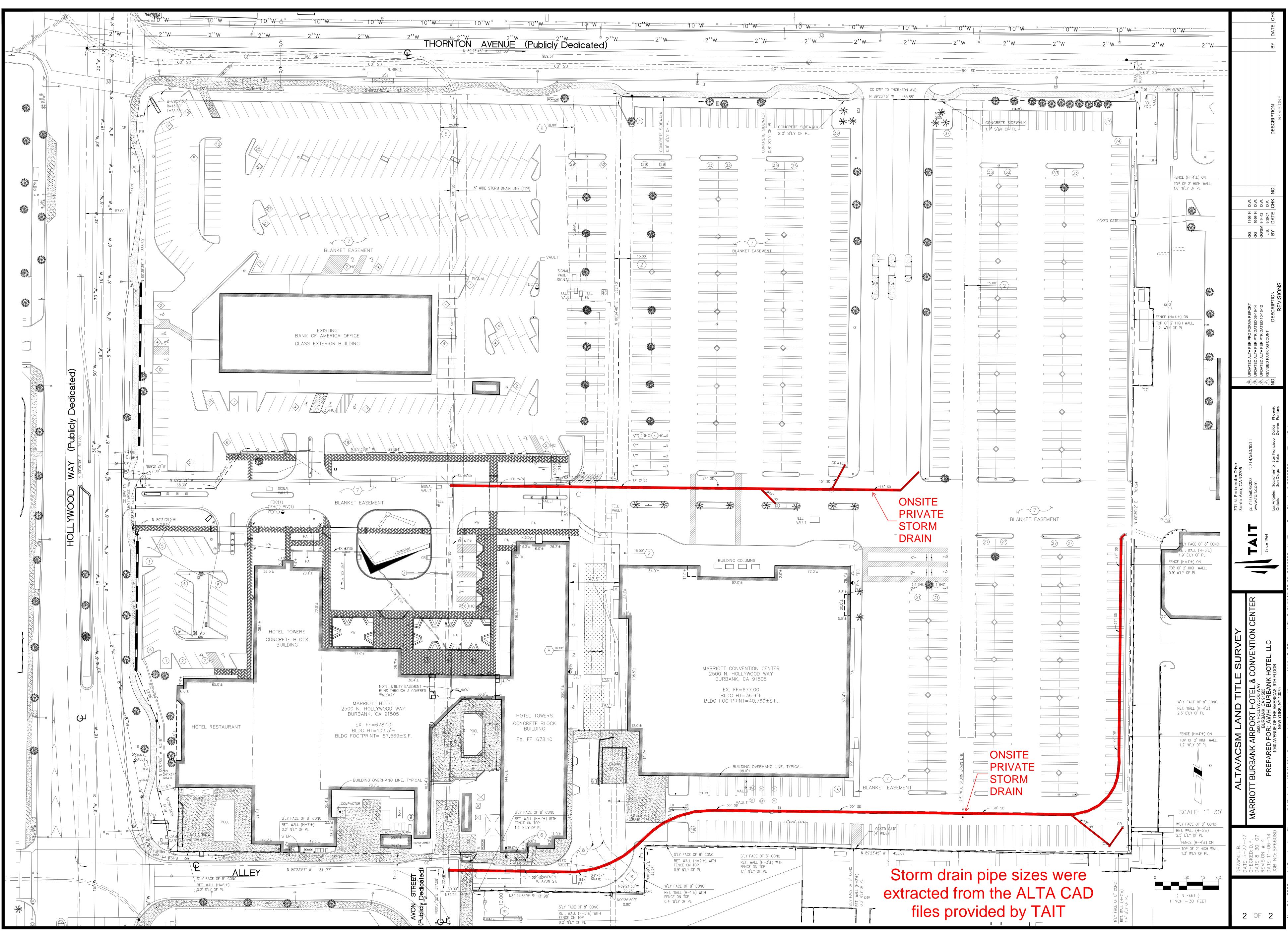
ENGINEERS NOTE TO CONTRACTOR: THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES PIPES, AND / OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BES OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION OF THOSE UNDERGROUND UTILITIES TO BE USED AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN HEREON.



	•	INDICATES FOUND MONUMENT AS NOTED	
(	R1)	RECORD PER PARCEL MAP NO. 24868 BOOK 279 / PAGES 84–86	
(	R2)	RECORD PER TRACT NO. 47420 BOOK 1185 / PAGES 60-62	
(	(R3)	RECORD PER PUBLIC WORK FIELD BOOK 1818 / PAGES 216-217, RECORDED OCTOBER 15, 1996	
(	R4)	RECORD PER PUBLIC WORK FIELD BOOK 1818 / PAGES 323-324 RECORDED JANUARY 21, 2002	
	$\otimes$	PARKING COUNT ON TITLE REPORT PROPERTY	ELEC VA
	$\bigotimes$	PARKING COUNT ON ADJACENT OFFICE BUILDING PROPERTY	

FOUND PK NAIL & WASHER. TAGGED LS 3587





## ATTACHMENT O

## EXISTING STORM DRAIN CAPACITY CALCULATIONS

Fuscoe Engineering, Inc.

#### Peak Flow Hydrologic Analysis

File location: F:/Projects/4147/001/\_Support Files/Reports/EIR/Water Resources - Burbank/Calcs/Additional Appendix O.pdf Version: HydroCalc 1.0.3

Project Name	Additional Flow into 30"
Subarea ID	Convention Center
Area (ac)	0.94
Flow Path Length (ft)	50.0
Flow Path Slope (vft/hft) 50-yr Rainfall Depth (in)	0.02
50-yr Rainfall Depth (in)	7.05
Percent Impervious	0.95
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor LID	0 False
	1 0150
Output Results	
Modeled (25-yr) Rainfall Depth (in)	6.1899
Peak Intensity (in/hr)	3.6931
Undeveloped Runoff Coefficient (Cu)	0.4769
Developed Runoff Coefficient (Cd)	0.8788
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.0509
Burned Peak Flow Ratè (cfs) 24-Hr Clear Runoff Volume (ac-ft)	3.0509 0.4141
24-Hi Clear Runoff Volume (ac-ft)	18037.0344
	Flow into 30": Convention Center)
3.5 Hydrograph (Additional F	
Hydrograph (Additional I	
3.5 Hydrograph (Additional F	
3.5 Hydrograph (Additional F	
3.5 Hydrograph (Additional F	
3.5 Hydrograph (Additional F 3.0 - 2.5 -	
3.5 Hydrograph (Additional F 3.0 - 2.5 -	
3.5 Hydrograph (Additional F 3.0 - 2.5 -	
3.5 Hydrograph (Additional F 3.0 - 2.5 -	
3.5 3.0 2.5 (SS) 2.0	
3.5 Hydrograph (Additional F 3.0 2.5 (§) 2.0 Hydrograph (Additional F 2.5 1.5	
3.5 3.0 2.5 (SS) 2.0	
3.5 Hydrograph (Additional F 3.0 2.5 (§) 2.0 Hydrograph (Additional F 2.5 1.5	
3.5 3.0 2.5 (sj) 2.0 Hydrograph (Additional R 2.5 1.5 1.0	
3.5 Hydrograph (Additional F 3.0 2.5 (§) 2.0 Hydrograph (Additional F 2.5 1.5	
3.5 3.0 2.5 (sc) Mol 1.5 1.0	
3.5 3.0 2.5 (sj) 2.0 Hydrograph (Additional R 2.5 1.5 1.0	

	Calculation	for 30" R	CP SD
Project Description			
Friction Method	Manning Formula		
Solve For	Discharge		
Input Data			
Roughness Coefficient		0.013	
Channel Slope		0.00500	ft/ft
Normal Depth		30.00	in
Diameter		30.00	in
Results			
Discharge		29.00	ft³/s
Flow Area		4.91	ft²
Wetted Perimeter		7.85	ft
Hydraulic Radius		7.50	in
Top Width		0.00	ft
Critical Depth		1.84	ft
Percent Full		100.0	%
Critical Slope		0.00632	ft/ft
Velocity		5.91	ft/s
Velocity Head		0.54	ft
Specific Energy		3.04	ft
Froude Number		0.00	
Maximum Discharge		31.20	ft³/s
Discharge Full		29.00	ft³/s
Slope Full		0.00500	ft/ft
Flow Type	SubCritical		
GVF Input Data			
Downstream Depth		0.00	in
Length		0.00	ft
Number Of Steps		0	
GVF Output Data			
Upstream Depth		0.00	in
Profile Description			
Profile Headloss		0.00	ft
Average End Depth Over Rise		0.00	%
Normal Depth Over Rise		100.00	%
Downstream Velocity		Infinity	ft/s

Bentley Systems, Inc. Haestad Methods Solititional DeFiterror Waster V8i (SELECTseries 1) [08.11.01.03] :00:41 PM 27 Siemons Company Drive Suite 200 W Watertown, CT 06795 USA +1-203-755-1666 Page 1 of 2

11/24/2020 12:00:41 PM

#### **Calculation for 30" RCP SD**

#### GVF Output Data

Upstream Velocity	Infinity	ft/s
Normal Depth	30.00	in
Critical Depth	1.84	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00632	ft/ft

## ATTACHMENT P

# OPERATIONS AND MAINTENANCE, AND CITY OF BURBANK COVENANT

#### **Infiltration Facility Operations and Maintenance**

#### **General Requirements**

Infiltration facility maintenance should include frequent inspections to ensure that water infiltrates into the subsurface completely within the recommended infiltration time of 72 hours or less after a storm (see Appendix E for guidance on facility inspection and Appendix F for an infiltration inspection and maintenance checklist).

Maintenance and regular inspections are of primary importance if infiltration basins and trenches are to continue to function as originally designed. A specific maintenance plan shall be developed specific to each facility outlining the schedule and scope of maintenance operations, as well as the documentation and reporting requirements. The following are general maintenance requirements:

- 1. Regular inspection should determine if the sediment pretreatment structures require routine maintenance.
- 2. If water is noticed in the basin more than 72 hours after a major storm or in the observation well of the infiltration trench more than 48 hours after a major storm, the infiltration facility may be clogged. Maintenance activities triggered by a potentially clogged facility include:
  - Check for debris/sediment accumulation, rake surface and remove sediment (if any) and evaluate potential sources of sediment and vegetative or other debris (e.g., embankment erosion, channel scour, overhanging trees, etc). If suspected upland sources are outside of the County's jurisdiction, additional pretreatment operations (e.g., trash racks, vegetated swales, etc.) may be necessary.
  - For basins, removal of the top layer of native soil may be required to restore infiltrative capacity.
  - For trenches, assess the condition of the top aggregate layer for sediment buildup and crusting. Remove top layer of pea gravel and replace. If slow draining conditions persist, entire trench may need to be excavated and replaced.
- 3. Any debris or algae growth located on top of the infiltration facility should be removed and disposed of properly.
- 4. Facilities should be inspected annually. Trash and debris should be removed as needed, but at least annually prior to the beginning of the wet season.
- 5. Site vegetation should be maintained as frequently as necessary to maintain the aesthetic appearance of the site, and as follows:
  - Vegetation, large shrubs, or trees that limit access or interfere with basin operation should be pruned or removed.

- Slope areas that have become bare should be revegetated and eroded areas should be regraded prior to being revegetated.
- Grass should be mowed to 4"-9" high and grass clippings should be removed.
- Fallen leaves and debris from deciduous plant foliage should be raked and removed.
- Invasive vegetation, such as Alligatorweed (*Alternanthera philoxeroides*), Halogeton (*Halogeton glomeratus*), Spotted Knapweed (*Centaurea maculosa*), Giant Reed (*Arundo donax*), Castor Bean (*Ricinus communis*), Perennial Pepperweed (*Lepidium latifolium*), and Yellow Starthistle (*Centaurea solstitalis*) must be removed and replaced with non-invasive species. Invasive species should never contribute more than 25% of the vegetated area. For more information on invasive weeds, including biology and control of listed weeds, look at the "encycloweedia" located at the California Department of Food and Agriculture website at <a href="http://www.cdfa.ca.gov/wma">http://www.cdfa.ca.gov/wma</a> or the California Invasive Plant Council website at <a href="http://portal.cal-ipc.org/weedlist">http://www.cdfa.ca.gov/wma</a> or the California Invasive Plant Council website at <a href="http://portal.cal-ipc.org/weedlist">http://weedlist</a>.
- Dead vegetation should be removed if it exceeds 10% of area coverage. Vegetation should be replaced immediately to maintain cover density and control erosion where soils are exposed.
- 6. For infiltration basins, sediment buildup exceeding 50% of the forebay sediment storage capacity, as indicated by the steel markers, should be removed. Sediment from the remainder of the basin should be removed when 6 inches of sediment accumulates. Sediments should be tested for toxic substance accumulation in compliance with current disposal requirements if visual or olfactory indications of pollution are noticed. If toxic substances are encountered at concentrations exceeding thresholds of Title 22, Section 66261 of the California Code of Regulations, the sediment must be disposed of in a hazardous waste landfill and the source of the contaminated sediments should be investigated and mitigated to the extent possible.
- 7. Following sediment removal activities, replanting and/or reseeding of vegetation may be required for reestablishment.

#### Maintenance Standards

A summary of the routine and major maintenance activities recommended for infiltration facilities is shown in Table 6-1. Detailed routine and major maintenance standards are listed in Tables 6-2 and 6-3.

Table 6-1: Infiltration Facility Routine and Major Maintenance Quick Guide

	Inspection and Maintenance Activities Summary
Routine Maintenance	<ul> <li>Remove trash and debris as required</li> <li>Repair and reseed erosion near inlet if necessary</li> <li>Remove any visual evidence of contamination from floatables such as oil and grease</li> <li>Clean under-drain (if present) and outlet piping to alleviate ponding and restore infiltrative capacity.</li> <li>Remove minor sediment accumulation, debris and obstructions near inlet and outlet structures as needed</li> <li>Mow routinely to maintain ideal grass height and to suppress weeds</li> <li>Periodically observe function under wet weather conditions</li> <li>Take photographs before and after maintenance (encouraged)</li> </ul>
Major Maintenance	<ul> <li>Clean out under-drains if present to alleviate ponding. Replace media if ponding or loss of infiltrative capacity persists and revegetate</li> <li>Repair structural damage to flow control structures including inlet, outlet and overflow structures</li> <li>De-thatch grass to remove accumulated sediment and aerate compacted areas to promote infiltration</li> </ul>

Defect	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed	Frequency
Trash & Debris	Any trash and debris which exceed 5 cubic feet per 1,000 square feet (one standard garbage can). In general, there should be no visual evidence of dumping. If less than threshold, all trash and debris will be removed as part of next scheduled maintenance.	Trash and debris cleared from site.	Annually prior to wet season. After major storm events (>0.75 in/24 hrs) if spot checks indicate widespread
Inlet Erosion	Visible evidence of erosion occurring near inlet structures.	Eroded areas repaired/reseeded	damage/ maintenance needs.
Visual Contaminants and Pollution	Any evidence of oil, gasoline, contaminants or other pollutants.	No contaminants or pollutants present.	Litter removal is dependent on site conditions and
Slow Drain Time	Standing water long after storm has passed (after 48 to 72 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved.	Water drains within 48 to 72 hours. Drainage pipe is cleared, accumulated litter on surface is removed, and top 1-2" of soil is raked or replaced.	desired aesthetics and should be done at a frequency to meet those objectives.
Inlets Blocked	Trash and debris or sediment blocking inlet structures.	Inlets clear and free of trash and debris.	
Appearance of Poisonous, Noxious or Nuisance Vegetation	Excessive grass and weed growth. Noxious weeds, woody vegetation establishing, Turf growing over rock filter.	Vegetation is mowed or trimmed to restore function. Weeds are removed to prevent noxious and nuisance plants from becoming established.	Monthly (or as dictated by agreement between County and landscape contractor).

Table 6-2: Routine Maintenance – Infiltration Facilities

Defect	Conditions When Maintenance Is Needed	Results Expected When Maintenance Is Performed	Frequency
Standing Water	Standing water long after storm has passed (after 24 to 48 hours), or visual inspection of wells (if available) indicates that design drain times are not being achieved	Design infiltration rate restored, either through excavation and filter media replacement or surface sediment removal. If applicable, underdrain cleaned, reset or replaced.	As needed

Table 6-3: Major Maintenance – Infiltration Facilities
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#### APPENDIX

#### SAMPLE AGREEMENT AND COVENANT FOR SUSMP MAINTENANCE

This agreement for SUSMP Maintenance, dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_ ("Effective Date") is executed between \_\_\_\_\_\_ and the City of Burbank, a municipal corporation (the "City").

- 1.) \_\_\_\_\_\_ ("Owner") is the owner of real property within the City of Burbank described in attached Exhibit A (*attach legal description*) and is developing a project known as \_\_\_\_\_\_\_ (the "Project") at \_\_\_\_\_\_ Burbank, California, situated on real property.
- 2.) The City desires that under the provisions of City Ordinance No. 3522, adopted September 5, 2000, relating to storm water discharge and urban runoff (the "Ordinance"), that certain storm water treatment devices are to be properly maintained on a regular basis. Said Ordinance incorporates the "Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County", adopted by the regional Water Quality Control Board, Los Angeles Region, on March 8, 2000 ("SUSMP").
- 3) In compliance with said Ordinance and the approved Project plans filed with the City, will be installing storm water treatment devices as specified on the approved drawings for Building Permit \_\_\_\_\_.
- 4) \_\_\_\_\_\_\_hereby agrees to maintain the installed storm water treatment devices in accordance with the maintenance schedule supplied by the device manufacturer, or at a level necessary to ensure continuing function and operability of the devices to ensure compliance with SUSMP as determined by the City Engineer, in his or her reasonable discretion and in accordance with industry standards, at no cost to the City. \_\_\_\_\_\_\_''s obligation to maintain the installed storm water treatment devices shall include the obligation to replace or repair the devices as to be operable and functioning in compliance with SUSMP in the event said devices become defective or in a state of disrepair.
- 5) This agreement shall run in perpetuity with the land, or for the operating life of the Project, and shall be binding on the property owner, their heirs, successors, agents, or assigns. This Agreement may be released if, in the City's reasonable discretion and in accordance with industry standards, alternative storm water treatment devices are substituted into the Project, or are otherwise no longer necessary.

"CITY" City of Burbank, a Municipal Corporation

Ву:	_
Its:	_
'OWNER"	
Ву:	
Its:	_
APPROVED this day of	_, 20, Office of the City Attorney
Ву:	_
Name:	_
Title:	_

Municipal Storm Water and Urban Runoff Discharges & Low Impact Development Standards Manual 2015