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FOURTH AND CENTRAL
HYDROLOGY AND WATER QUALITY REPORT
400 CENTRAL AVENUE, LOS ANGELES
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1. INTRODUCTION

The Fourth & Central Project (Project) would generally be located at 400 Central Avenue and is made up of six (6) parcels, with a total land area of approximately 7.6 acres (333,602 gross sf of lot area). The parcels that make up the Project Site are clustered across three City blocks and include the following three areas:

- The 1.35-acre North Site (APN 5147-001-007) is generally located at the northeast corner of Central Avenue and 4th Street.
- The 5.98-acre South Site (APN 5147-013-016) is generally bound by 4th Street to the north, Alameda Street to the east, Central Avenue to the west and industrial uses to the south. The southern boundary of the South Site generally terminates near the intersection of 5th Street and Central Avenue.
- The 0.32-acre West Site (APNs 5147-012-015, 5147-011-015, -016, -017) is generally located west of the intersection of Gladys Avenue and Central Avenue.

Currently, the Project Site is occupied by cold storage facilities that include warehouse and wholesale commercial buildings and associated office space, truck loading docks, and surface parking. The existing buildings on the Project Site total approximately 360,734 sf of floor area.

The North Site is currently developed with a six-story cold storage warehouse building and attached single-story warehouse. The six-story cold storage warehouse also includes a one-level basement, which is not counted as part of the six, above ground stories. The combined floor area of the two buildings is approximately 167,596 sf. Approximately 20 loading docks for the North Site are located along 4th Street and Central Avenue.

The South Site is developed with a two-story cold storage building totaling approximately 190,267 sf and a conjoining 2,871 sf, single-story office building. The two buildings have a total floor area of approximately 193,138 sf. The South Site also includes 47 loading docks and paved surface parking with approximately 33 spaces that serve the warehouse building.

The West Site provides 39 parking spaces in a fenced, paved lot and is not improved with any buildings. The paved lot allows for additional parking for the existing cold storage facilities across Central Avenue on the North and South Sites.

The Project would demolish the existing surface parking and cold storage facility uses on the West and South Sites, respectively, and adaptively reuse a portion of six-story cold storage building on the North Site, while demolishing the remaining warehouse uses.

The Project would include a mix of residential, office, restaurant/retail, and hotel uses within 10 distinct buildings over the three Sites totaling approximately 2,318,534 sf, for a floor area ratio (FAR) of 6.95:1. The Project would include: up to 1,521 residential units, including affordable housing units, totaling approximately 1,581,514 sf; approximately 401,101 sf of office uses; approximately 93,100 sf of restaurant/retail uses; and, 68 hotel rooms (41,960 sf of hotel floor area). The overall floor area also includes approximately 200,859 sf of "covered open space," which includes outside areas that have an over-hang or roof, such as building

entrances and the covering over the hotel courtyard. The Project would include approximately 90,113 sf of publicly accessible open space, including paseos passing between S. Central Avenue and S. Alameda Street, plazas, and pocket parks within the North and South Sites. The proposed buildings would range in height from 2 to 44 stories, with a maximum height of approximately 497 feet. The Project would provide 2,445 vehicle parking spaces within subterranean parking (up to 4 levels) and podium parking.

Overall, construction would include up to approximately 651,000 cubic yards (CY) of grading (cut), including 105,000 CY within the North Site, 534,000 CY in the South Site and 12,000 CY in the West Site, all of which would be exported from the Project Site. On the North Site, excavations would extend to approximately 57 feet below the ground surface (bgs) for the lowest foundations and approximately 64 feet bgs in isolated areas for elevator pits. On the South Site, excavations would extend to approximately 53 feet bgs for the lowest foundations and approximately 60 feet bgs in isolated areas for elevator pits. On the West Site, excavations would extend to approximately 22 feet bgs for the lowest foundations and approximately 29 feet bgs in isolated areas for elevator pits.

2. ENVIRONMENTAL SETTING

2.1. SURFACE WATER HYDROLOGY

2.1.1. REGIONAL

As illustrated on Figure 8, the Project Site is located within the Los Angeles River Watershed Reach 2 (from Carson to Figueroa Street) in the Los Angeles Basin. The Watershed encompasses an area of approximately 834 square miles and is bounded, at its headwaters, by the Santa Monica, Santa Susana, and San Gabriel mountains to the north and west. The southern portion of the Watershed captures runoff from urbanized areas surrounding downtown Los Angeles. Jurisdictions in the Watershed include the City of Los Angeles (33%), 42 other cities (29%), and eight agencies (37%). The 55-mile long Los Angeles River originates in western San Fernando Valley and flows through the central portion of the city south to San Pedro Bay near Long Beach. Most portions of the Los Angeles River are completely channelized for flood protection, as are many of its tributaries including Compton Creek, Rio Hondo, Arroyo Seco, and Tujunga Wash. They are fed by a complex underground network of storm drains and a surface network of tributaries.

2.1.2. LOCAL

Offsite underground storm drain facilities in the Project vicinity (see Figure 2) consist of the following:

- **4th Street:** There is a City owned and maintained 21-inch storm main that increases to 24-inches in 4th Street between Central Avenue and Alameda Street that conveys flow eastward to Alameda Street where it connects to an 87-inch main that is maintained and owned by the Los Angeles County Flood Control District

(LACFCD) where it continues east on 4th Street. There are four catch basins located on 4th Street, three catch basins are located on the north side and captures the sheet flow from the northern part of 4th Street. There is a catch basin located on the southeast side of 4th Street that captures the water flowing east on the southern part of 4th Street.

- **Central Avenue:** There is a 12-inch storm main line in Central Avenue that conveys the flow northward towards 4th Street where it connects to the Los Angeles County owned 87-inch main. There are 4 catch basins located on the east side of Central Avenue, 3 out of the 4 connects to the 12-inch main, and the south catch basin connects to the 30-inch main in 5th street.

- **Gladys Avenue:** There is a catch basin on the north corner of 5th Street and Gladys Avenue that connects to the 30-inch line located in 5th Street.

- **Alameda Street:** There is a 30-inch storm main in Alameda Street. There are three catch basins, one on the north end and two on the southern end of Alameda Street and conveys the flow into the 30-inch main flowing southward and ultimately discharges into the Los Angeles River to the southeast.

The stormwater runoff from the Project Site is discharged into offsite storm drainage catch basins and underground storm drainage pipes which convey stormwater through various underground pipe networks into the Los Angeles River. The Los Angeles River flows generally east and south, ultimately discharging into the Pacific Ocean at the San Pedro Bay.

2.1.3. PROJECT SITE

Under existing conditions, the Project Site is divided into six drainage areas, which are described below and shown in Figure 2.[1] These drainage areas are determined by the drainage patterns and flow paths of stormwater that are tributary to a common point or area.

- The drainage from Area A, the north portion of the Project Site (north of 4th Street and east of Central Avenue), is directed via building roof drains and area drains and sheet flows south into two existing curb inlet catch basins, one located at the northeastern side of 4th Street and Central Avenue intersection, and one located on the northern side of 4th Street between Central Avenue and Alameda Street.

[1] The drainage areas tributary to each discharge point or area were determined from a topographical survey and site observations.

- The drainage from Area B, a partial portion of the of the South Project Site facing Central Avenue, sheet flows south onto the existing asphalt pavement and into the existing curb inlet catch basin on the eastern end of Central Avenue.

- The drainage from Area C, located at the northern portion of the South Project Site is directed via building roof drains and curb drains and surface flows east towards a curb inlet catch basins located on the south side of 4th Street.

- The drainage from Area D, the southwest portion of the south Project Site is directed via building roof drains and sheet flow south and southwest into the existing curb inlet catch basin on the eastern end of Central Avenue.

- The drainage from Area E, the southeast portion of the south Project Site is directed via building roof drains and sheet flow south onto the existing curb inlet catch basin on Alameda Street.

- The Drainage from Area F, the west portion of the Project site, located on the west side of Central Avenue and north of Gladys Avenue, sheet flows southwest into the existing curb inlet catch basin on the northern corner of Gladys and 5th Street.

The Project Site consists of several impervious surfaces, including buildings, surface parking, and pavement for pedestrian and vehicular circulation. The Project Site consists of minimal pervious areas including a landscaped area on the West site and a dirt/gravel area by the old railroad on the northeast side of the South Site. The existing Project Site consists of improvements of the North, South, and West Sites and is approximately 97% impervious. A summary of existing impervious conditions is found in Table 1a below.

Generally, the portion of the Project Site occupied by existing buildings and parking spaces slopes downward from north to south by approximately three feet over approximately 1,000 linear feet[2].

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

Table 1a- Existing Drainage Stormwater Runoff Calculations for Project Area				
Drainage Area	Area (Acres)	Percent Imperviousness (%)	Q50 (cfs) (volumetric flow rate measured in cubic feet per second)	V50 (cf) (volume of flow measured in cubic feet)
A	1.35	100	4.28	25,807

[2] The entire length of the Project Site is approximately 1,365 feet.

B	0.36	100	1.14	6,882
C	1.65	100	5.23	31,542
D	1.06	100	3.36	20,263
E	2.92	92.6	9.25	55,819
F	0.32	98.3	1.01	6,038
Total	**7.66**	**97.1%**	**24.27**	**146,351**

2.2. SURFACE WATER QUALITY

2.2.1. REGIONAL

As stated above, the Project Site lies within the Los Angeles River Watershed Reach 2. Constituents of concern listed for the Los Angeles River Reach 2 under California's Clean Water Act Section 303(d) List include ammonia, copper (dissolved), lead, algae, oil, bacteria, and trash.[3]

2.2.2. LOCAL

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

2.2.3. PROJECT SITE

Based on the ALTA survey by KPFF shown in Figure 1 (dated April 21, 2021), site observations, and the fact that the existing site was developed prior to the enforcement of storm water quality Best Management Practices (BMPs) design, implementation and maintenance, it appears the Project Site currently does not implement BMPs and has no means of treatment for stormwater runoff.

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3 https://iaspub.epa.gov/waters10/attains_waterbody.control?p_au_id=CAR4051501019990202085021&p_list_id=CAR4051501019990202085021&p_cycle=2016; accessed August 4, 2021.

2.3. GROUNDWATER HYDROLOGY

2.3.1. REGIONAL

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

2.3.2. LOCAL

Within the Basin, the Project Site specifically overlies the northeast portion of the Central Subbasin (subbasin), which occupies a large portion of the southeastern part of the Coastal Plain of Los Angeles Groundwater Basin. This subbasin is commonly referred to as the "Central Basin". The Central Basin is bounded on the north by a surface divide called the La Brea high, and on the northeast and east by emergent, less permeable Tertiary rocks of the Elysian, Repetto, Merced and Puente Hills. The southeast boundary between Central Basin and Orange County Groundwater Basin roughly follows Coyote Creek, which is a regional drainage province boundary. The southwest boundary is formed by the Newport Inglewood fault system and the associated folded rocks of the Newport Inglewood uplift.[4]

Groundwater enters the Central Basin through surface and subsurface flow and by direct percolation of precipitation, stream flow, and applied water; and replenishes the aquifers dominantly in the forebay areas (an area with a free groundwater surface, meaning that the uppermost aquifer is unconfined and percolating surface waters can reach the aquifer rapidly) where permeable sediments are exposed at ground surface (DWR 1961). Natural replenishment of the subbasin's groundwater supply is largely from surface inflow through Whittier Narrows (and some underflow) from the San Gabriel Valley. Imported water purchased from Metropolitan Water District and recycled water from Whittier and San Jose Treatment Plants are used for artificial recharge in the Montebello Forebay at the Rio Hondo and San Gabriel River spreading grounds (DWR 1999).

The Central Basin Watermaster notes that precipitation over the Central Basin has relatively minimal direct influence on the replenishment of the groundwater in the Central Basin. This is a result of the low soil permeability that characterizes the primary water-producing aquifers throughout much of the Central Basin and largely impermeable surfaces (i.e., pavement and buildings) covering most of the forebay areas. Natural replenishment of the groundwater in the Central Basin occurs largely from surface flow that is captured and infiltrated, and underflow through Whittier Narrows from the San Gabriel Valley.

[4] http://www.water.ca.gov/groundwater/bulletin118/basindescriptions/4-11.04.pdf

Intentional replenishment of groundwater in the Central Basin is accomplished by capturing and spreading water at infiltration basins. The sources of this replenishment water include local storm runoff, local dry weather urban runoff, imported water purchased from the Metropolitan Water District of Southern California, and recycled water purchased from Los Angeles County Sanitation Districts. All sources of water available for the Central Basin would total 134,801acre-feet during the 2018-2019 water year.[5]

2.3.3. PROJECT SITE

The total area of the Project Site is approximately 333,602 square feet. As noted above, the Project Site is currently occupied by cold storage warehouse facilities and surface parking. Two areas of the Project Site show a potential for groundwater recharge. The West Site is primarily impervious but has planters that could contribute to groundwater recharge. Likewise, the South Site has an area on the northeast where there is an abandoned railroad and where the groundcover is dirt and gravel, therefore this area is susceptible to infiltration. Due to the minimal pervious condition of the Project Site (3%) and the infiltration testing performed on the site by Geocon West. Inc., there is a small recharge potential under the existing conditions.

As described in the *Preliminary Geotechnical Investigation* prepared for the Project Site by Geocon West Inc. (July 2, 2021), the highest historical groundwater level is approximately 75 feet bgs and no groundwater was encountered in the borings, drilled to a maximum depth of 100½ feet below the existing ground surface, the general flow direction of the Central Basin is towards the south and south-west direction. Based on historic groundwater levels in the Project Site vicinity and the depth of proposed construction, groundwater is not expected to be encountered.

2.4. GROUNDWATER QUALITY

2.4.1. REGIONAL

As stated above, the City of Los Angeles overlies the Los Angeles Coastal Plain Groundwater Basin, which falls under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB). According to LARWQCB's Basin Plan, water quality objectives applying to all ground waters of the region include Trash, Nutrients (Algae), Ammonia, Indicator Bacteria, Oil, Copper, Lead, Scum/Foam, Taste and Odor.[6]

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5 Central Basin Watermaster, Watermaster Service in The Central Basin - Los Angeles County, July 1, 2018 - June 30, 2019, Table 15.

6 Final California 2018 Integrated Report (303(d) List/305(b) Report) Regional Board 4 - Los Angeles Region, https://www.waterboards.ca.gov/water_issues/programs/tmdl/2018state_ir_reports_final/apx_c_state_factsheets/01095.shtml, accessed October 8, 2021.

2.4.2. LOCAL

As stated above, the Project Site specifically overlies the Central Subbasin. Based upon LARWQCB's Basin Plan, constituents of concern listed for the Central Subbasin include boron, chloride, sulfate, Total Dissolved Solids (TDS), and nitrate.[7]

2.4.3. PROJECT SITE

Two areas of the Project Site show a potential for groundwater recharge. The West Site is primarily impervious but has planters that could contribute to groundwater recharge. Likewise, the South Site has an area on the northeast where there is an abandoned railroad and where the groundcover is dirt and gravel, therefore this small pervious area is susceptible to infiltration. Given the infiltration recommendations by Geocon West. Inc and due to the partial perviousness of the Project Site (3%), there is a small potential for surface water-borne contaminants to percolate into groundwater and affect groundwater quality. Nonetheless, groundwater quality may be impacted by past and existing activities at the Project Site.

The below discussion is based upon a review of relevant previous investigations and on-site explorations conducted as part of the Phase I Environmental Site Assessment (ESA) dated September 10, 2020 for the Project Site by Geocon West Inc. As a part of the investigation Geocon West found no records of former or existing USTs in federal, state, and local environmental databases and at the LACFD. While it is possible that metals and pesticides may be present at in soil in the vicinity of railroad track at concentrations that could represent a concern for future development/use of the Site, the ESA mentions that there is insufficient evidence to identify the railroad tracks as an REC, since the Site was not a maintenance facility and, as discussed in Section 6.3 of the ESA, evidence of potentially problematic ballast materials (slag ballast) or indications of potential spills or releases, such as stained soil, were not observed along the railroad tracks. However, as part of standard construction practices, soil at the Site should be tested to develop a waste profile to ensure exported soils meet the disposal requirements of the receiving construction and demolition (C&D) facility or construction site.

In the event that contaminated soils are encountered during construction, including those associated with USTs or the abandoned railroad tracks, evaluation of the nature and extent of the contamination would be required. Appropriate handling, disposal, and/or treatment is required to be performed in accordance with applicable regulatory requirements, including South Coast Air Quality Management District (SCAQMD) Rule 1166 and under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit issued for the project.

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[7] Ibid.

3. PROPOSED PROJECT

3.1. CONSTRUCTION

3.1.1. SURFACE WATER HYDROLOGY

The Project would demolish all of the existing cold storage uses and parking on the South and West Sites. On the North Site, the single-story warehouse would also be demolished, however, the Project intends to preserve and adaptively reuse a portion of the existing six-story industrial building on the North Site. The North Site would have excavations depths to approximately 57 feet bgs for the lowest foundations and approximately 64 bgs in isolated areas for elevator pits. The South Site would have excavations depths to approximately 53 feet bgs for the lowest foundations and approximately 60 bgs in isolated areas for elevator pits. The West Site would have excavations depths to approximately 22 feet bgs for the lowest foundations and approximately 29 bgs in isolated areas for elevator pits.

It is anticipated that up to approximately 651,000 CY of soil would be graded and exported to construct the Project, including 105,000 CY within the North Site, 534,000 CY in the South Site and 12,000 CY in the West Site. These activities have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and making the Project Site temporarily more permeable. Also, exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities to reduce airborne dust could contribute to pollutant loading in runoff.

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

In addition, the Project would be required to comply with all applicable City grading permit regulations that require necessary measures, plans, and inspections to reduce sedimentation and erosion. Thus, through compliance with all NPDES General Construction Permit requirements, including preparation of a SWPPP, implementation of BMPs, and compliance with applicable City grading regulations, the Project would not substantially alter the Project Site drainage patterns in a manner that would result in substantial erosion,

siltation, or flooding on- or off-site. Similarly, adherence to standard compliance measurements in construction activities would avoid flooding, substantially increasing or decreasing the amount of surface water flow from the Project Site into a water body, or a permanent, adverse change to the movement of surface water.

3.1.2. SURFACE WATER QUALITY

Construction activities such as earth moving, maintenance/operation of construction equipment, and handling/storage/disposal of materials could contribute to pollutant loading in stormwater runoff. However, as previously discussed, the Project would be required to obtain coverage under the NPDES General Construction Permit (order No. 2009-0009-SWQ). In accordance with the requirements of the permit, the Project Applicants would prepare and implement a site-specific SWPPP adhering to the California Stormwater Quality Association (CASQA) BMP Handbook. The SWPPP would specify BMPs to be used during construction. BMPs would include, but would not necessarily be limited to: erosion control, sediment control, non-stormwater management, and materials management BMPs. Refer to Exhibit 1 for typical SWPPP BMPs implemented during the construction of development projects.

With the implementation of site-specific BMPs included as part of the required Erosion Plan, the Project would reduce or eliminate the discharge of potential pollutants from the stormwater runoff. In addition, the Project Applicant would be required to comply with City grading permit regulations, which require implementation of necessary measures, plans (including a wet weather erosion control plan if construction occurs during the rainy season), and inspection to reduce sedimentation and erosion. Therefore, with compliance with NPDES requirements and City grading regulations, construction of the Project would not result in discharge that would cause: (1) pollution which would alter the quality of the water of the State (i.e. Los Angeles River) to a degree which unreasonably affects beneficial uses of the waters; (2) contamination of the quality of the water of the State by waste to a degree which creates a hazard to the public health through poisoning or through the spread of diseases; or (3) nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Furthermore, construction of the Project would not result in discharges that would cause regulatory standards to be violated in Los Angeles River.

3.1.3. GROUNDWATER HYDROLOGY

Given the excavation depths and anticipated groundwater depth, no dewatering operations are expected. However, if groundwater is encountered during construction, temporary pumps and filtration would be utilized in compliance with all applicable regulations and requirements, including all relevant NPDES requirements related to construction and discharges from dewatering operations. No operational dewatering is expected or anticipated. Therefore, the Project would not substantially deplete groundwater supplies in a manner that would result in a net deficit in aquifer volume or lowering of the local groundwater table.

3.1.4. GROUNDWATER QUALITY

As discussed under section 2.4.3 the phase 1 Environmental Site Assessment revealed no evidence of recognized environmental conditions (RECs) in connection with the Site. However, it acknowledged that due to historical railroad tracks on the Project Site, pesticides and arsenic may be present at concentrations of potential concern or represent a concern in limited areas of the Project Site. During Project construction, the soils would be tested for any such soil contaminates and would be removed in accordance with applicable regulatory requirements.

During on-site grading and building construction, hazardous materials, such as fuels, paints, solvents, and concrete additives, could be used and would require proper management and, in some cases, disposal. The management of any resultant hazardous wastes could increase the opportunity for hazardous materials releases into groundwater. Compliance with all applicable federal, state, and local requirements concerning the handling, storage and disposal of hazardous waste, would reduce the potential for the construction of the Project to release contaminants into groundwater that could affect existing contaminants, expand the area or increase the level of groundwater contamination, or cause a violation of regulatory water quality standards at an existing production well.

There are currently no active groundwater wells within one mile of the Project Site[8].

3.2. OPERATION

3.2.1. SURFACE WATER HYDROLOGY

The Project will meet the requirements of the City's Low Impact Development (LID) standards.[9] Under section 3.1.3. of the LID Manual, post-construction stormwater runoff from a new development must be infiltrated, evapotranspirated, captured and used, and/or treated through high efficiency BMPs onsite for at least the volume of water produced by the greater of the 85th percentile storm or the 0.75 inch storm event. The LID Manual prioritized the selection of BMPs used to comply with stormwater mitigation requirement. The order of priority is:

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

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[8] Los Angeles County Department of Public Works, Groundwater Wells Data, http://dpw.lacounty.gov/general/wells/ accessed August 4, 2021.

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

Feasibility screening delineated in the LID manual is applied to determine which BMP will best suit the Project. Based on the screening criteria, infiltration is not considered feasible as the primary LID system at the Project Site. Based on the infiltration testing performed on the site by Geocon West. Inc geotechnical report, infiltration is feasible at 29-40 feet below ground surface. Specifically, LID guidelines require that infiltration systems maintain at least ten feet of clearance to the groundwater, property line, and any building structure. Thus, due to the Project's planned basement and excavation depth of 64 feet below the ground surface, infiltration is not considered feasible with the exception of building 10 that have a single subterranean level and will likely fall under priority tier 1. Therefore, the majority of the Project will land in priority tier 2 – capture and use. The Project would implement capture and use systems to collect and store the first flush of stormwater runoff to satisfy LID requirements and use it for irrigation. Based on the proposed landscape area and irrigation demands, a capture and reuse system is feasible for the Site. Any infiltration and capture and use system will be designed to comply with the latest City of LA LID standards.

The post-project condition is approximately 85.37% impervious. The analysis includes the landscaped areas on the building roofs and podium, which is open to sky.

Under the proposed conditions illustrated in Figure 3, the Project Site would consist of four drainage areas (A through D) that would drain via building roof drains, area drains, surface flow, and subterranean drainage to the proposed BMPs. Area E is included to accurately represent the comparison between the existing and proposed conditions in order to keep the total area consistent in the analysis.

- **Drainage Area A** represents the North Site.
- **Drainage Area B** represents the West Site.
- **Drainage Area C** represents the north portion of the South Site**.**
- **Drainage Area D** represents the south portion of the South Site.
- **Drainage Area E** represents the street dedicated area of the South Site.

Stormwater runoff from all drainage areas will be conveyed to the Project BMPs. Figure 5A-E shows all the input parameters used for analyzing the proposed Project Site.

Table 2a shows the proposed volumetric flow rates and volumes generated by a 50-year storm event for the Project.

Table 2a - Proposed Onsite Drainage Stormwater Runoff Calculations for Project Area

Drainage Area	Area (Acres)	Percent Imperviousness (%)	Q50 (cfs) (volumetric flow rate measured in cubic feet per second)	V50 (cf) (volume of flow measured in cubic feet)
A	1.35	86	4.25	23,054
B	0.33	79	1.04	5,299
C	2.41	88	7.59	41,858
D	3.38	83	10.62	56,737
E	0.20	100	0.63	3,823
Total	**7.66**	**85.37**	**24.13**	**130,771**

Compliance with the Low Impact Development (LID) requirements for the Project Site would ensure stormwater treatment with post-construction BMPs that are required to control pollutants associated with storm events up to the 85th percentile storm event, per the City's Stormwater Program. In order to meet the LID requirements, it is estimated that up to 22,400 cubic feet of stormwater for the Project Site will need to be captured and treated on-site, where up to 4,375 cf would need to be mitigated on the North Site, 16,989 cf on the South Site and 1,036 cf on the West Site respectively (see Figure 6A-C). To capture and treat this LID design volume and comply with the LID ordinance the Applicant would likely install capture and use systems which may be supplemented by infiltration or bio-filtration systems. The capture and use system would temporarily store the captured stormwater until the stored volume is entirely used through irrigation on the Project Site.

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

Table 3a – Pre- and Post-Project 50-year frequency peak flow rates for Project Area				
Drainage Area	**Project Site Area (Acres)**	**Pre-Project Q50 (cfs)** (volumetric flow rate measured in cubic feet per second)	**Post-Project Q50 (cfs)** (volumetric flow rate measured in cubic feet per second)	**Decrease from Existing to Proposed Condition (%)**
Entire Site	7.66	24.27	24.13	0.58%

The Project would decrease the 50-year peak flow rate from the entire Project Site by 0.58%. In addition, the Project would improve current conditions by capturing and treating the 85th percentile storm, and thus reducing the peak flow of the stormwater discharged to the public infrastructure.

In addition, as described above, as part of the SUSMP and LID strategy for the Project to manage post-construction stormwater runoff, the Project would include the installation of building roof drain downspouts, catch basins, and planter drains throughout the Project Site to collect roof and site runoff and direct stormwater to the approved installed BMP's. This on-site stormwater conveyance system would serve to prevent on-site flooding and nuisance water on the Project Site.

Table 4a summarizes the existing and post-Project 50-year design storm event 24-hour volumetric flows from the Project Site.

Table 4a– Pre- and Post-Project 50-year 24-hour volume flow for Project Area

Drainage Area	**Project Site Area (Acres)**	**Pre-Project V50 (cf)** (volumetric flow measured in cubic feet)	**Post-Project V50 (cf)** (volumetric flow measured in cubic feet)	**Estimated Low Impact Development Treatment Volume** (volumetric flow measured in cubic feet)	**Decrease from Existing to Proposed Condition (%)**
Entire Site	7.66	146,351	130,771	22,400	26.0%

The Project would decrease the 50-year flow volume from the entire Project Site, and the Project would improve current conditions by capturing and treating the 85th percentile storm, thus decreasing the volume of the stormwater discharged to the public infrastructure.

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

Earthquake-induced flooding can result from the failure of dams or other water-retaining structures resulting from earthquakes. According to the City of Los Angeles General Plan Safety Element, Exhibit G: Inundation & Tsunami Hazard Areas (Refer to Figure 10), the Project Site is located in a potential dam inundation area. Dam safety regulations are the primary means of reducing damage or injury due to inundation occurring from dam failure. The California Division of Safety of Dams regulates the siting, design, construction, and periodic review of all dams in the State. In addition, the Los Angeles Department of Water and Power (LADWP) operates the dams in the Project Site area and mitigates the potential for overflow and seiche hazard through control of water levels and dam wall height. These measures include seismic retrofits and other related dam improvements completed under the requirements of the 1972 State Dam Safety Act. The City's Local Hazard Mitigation Plan,[10] which was adopted in July 2011, provides a list of existing programs, proposed activities and specific projects that may assist the City of Los Angeles in reducing risk and preventing loss of life and property damage from natural and human-caused hazards, including dam failure. The Hazard Mitigation Plan evaluation of dam failure vulnerability classifies dam failure as a moderate risk rating. Therefore, considering the above information and risk reduction projects, the risk of flooding from inundation by a seiche or dam failure is considered low.

Additionally, the Project Site is not located within a Special Flood Hazard Area (100-year floodplain) or Moderate Flood Hazard Area (500-year floodplain) identified by the Federal Emergency Management Agency (FEMA) and published in the Flood Insurance Rate Maps (FIRM).[11] The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 500-year floodplain are labeled Zone C or Zone X (unshaded). As shown on Figure 9, the Project Site is located within Zone X (unshaded) and is therefore located outside of the 100- and 500-year floodplain.[12]

3.2.2. SURFACE WATER QUALITY

As previously described, the Project would be required to implement SUSMP and LID requirements throughout the operational life of the Project. As part of these requirements, the Project would prepare a SUSMP which would outline the stormwater treatment measures or post-construction BMPs required to control pollutants of concern. In addition, consistent with LID requirements to reduce the quantity and improve the quality of rainfall runoff that leaves the Project Site, the Project would include the installation of an capture and use system as established by the LID Manual.

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[10] City of Los Angeles Emergency Management Department, *Local Hazard Mitigation Plan,* dated July 1, 2011.

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

[12] Based on FIRM Number 06037C1636G, effective on 12/21/2018.

The LID Manual prioritizes BMPs with infiltration systems as the top tier priority BMP. Feasibility of the proposed infiltration BMP will be determined according to the criteria established in the LID manual, along with coordination with the City. Based on the explorations of the Project Site, it appears that infiltration is feasible, however based on the footprint of the proposed buildings and the depth of basement levels a capture and use system is likely to be the main LID BMP system for the Project Site. As is typical of most urban developments, stormwater runoff from the Project Site has the potential to introduce pollutants into the stormwater system. Anticipated and potential pollutants generated by the Project are sediment, nutrients, pesticides, metals, pathogens, and oil and grease.

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

- Promote evapotranspiration and infiltration, and the use of native and/or drought tolerant plants;
- Provide storm drain system stenciling and signage to discourage illegal dumping;
- Design material storage areas and loading docks within structures or enclosures to prevent leaks or spills of pollutants from entering the storm drain system;
- Provide evidence of ongoing BMP maintenance as part of a legal agreement with the City of Los Angeles. Recorded covenant and agreements for BMP maintenance are part of standard building permit approval processing; and
- Design post-construction structural or treatment control BMPs to infiltrate stormwater runoff. Stormwater treatment facilities and systems would be designed to meet the requirements of the SUSMP and LID Manual.

As described above, the Project Site currently does not have structural BMPs in place for the treatment of stormwater runoff from the existing impervious surfaces. Therefore, implementation of BMP systems proposed as part of the Project would result in a substantial improvement in surface water quality runoff from the Project Site. In implementation of BMPs, which would utilize the natural adsorption[13] and filtration characteristics of vegetated pervious surfaces, would allow for more opportunities to direct stormwater to flow through the planting media where pollutants are filtered, absorbed, and biodegraded by the soil and plants.. However, due to the limited vegetated area of both the existing and proposed Project site, these effects are expected to be less significant than the proposed structural BMPs described above in terms of incremental improvement of existing conditions.

[13] Adsorption is the attachment of pollutants in water to soil particles, resulting in retention of pollutants.

Based on the above, with implementation of BMPs such as those described above, operation of the Project would not result in discharges that would cause: (1) an incremental increase in pollution which would alter the quality of the waters of the State (i.e., Los Angeles River) to a degree which unreasonably affects beneficial uses of the waters; (2) an incremental increase of 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) an incremental increase in the nuisance that would be injurious to health; affect an entire community or neighborhood, or any considerable number of persons; and occurs during or as a result of the treatment or disposal of wastes. Furthermore, operation of the Project would not result in discharges that would cause regulatory standards to be violated in the San Pedro Bay and Long Beach Harbor.

3.2.3. GROUNDWATER HYDROLOGY

The percolation of precipitation that falls on pervious surfaces is variable dependent upon the soil type, condition of the soil, vegetative cover, and other factors. The implementation of the Project would include the addition of impervious surfaces throughout the Project Site boundary. However, as the Project is located in a highly urbanized area, any reduction in groundwater recharge due to the overall net change in impervious area would be minimal in the context of the regional groundwater basin. The Project would include the installation of SUSMP and LID BMPs, which would mitigate at minimum the first flush or the equivalent of the greater between the 85th percentile storm and first 0.75-inch of rainfall for any storm event. The installed BMP systems will be designed with an internal bypass or overflow system to prevent upstream flooding due to large storm events. The stormwater which bypasses the BMP systems would discharge to an approved discharge point in the public right-of-way and not result in infiltration of a large amount of rainfall, which would affect groundwater hydrology, including the direction of groundwater flow.

As discussed above in Section 3.1.4, there are no active groundwater monitoring wells in the vicinity.

3.2.4. GROUNDWATER QUALITY

Operational activities which could affect groundwater quality include spills of hazardous materials and leaking underground storage tanks. Surface spills from the handling of hazardous materials most often involve small quantities and are cleaned up in a timely manner, thereby resulting in little threat to groundwater. Other types of risks such as leaking underground storage tanks have a greater potential to affect groundwater. No underground storage tanks exist at the Project Site. Additionally, construction of the proposed subterranean parking structures will remove any unforeseen UST's, any removal will go through the proper permits and City removal requirements. In addition to the underground LID BMP systems described above, multiple underground stormwater storage pipes/tanks may be operated by the Project. All tanks will be installed and maintained in compliance of all existing regulations.

In addition, while the development of expanded facilities would increase the use of existing on-site hazardous materials, compliance with all applicable existing regulations at the Project Site would prevent the Project from affecting or expanding any potential areas of contamination, increasing the level of contamination, or causing regulatory water quality standards at an existing production well to be violated, as defined in CCR, Title 22, Division 4, Chapter 15 and the Safe Drinking Water Act.

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

3.3. CONCLUSION

In conclusion, the Project will improve the Project Site's hydrologic function, as compared to existing conditions. The current site design and existing conditions allow the Applicant multiple options to install BMP systems that would comply with the City's LID requirements. Whereas stormwater from the Project Site currently either sheet flows into an underground storm drain network that ultimately discharges to the Los Angeles River, implementation of the Project would capture and treat stormwater on-site, improving water quality in receiving water bodies..

APPENDICES

ALTA/NSPS LAND TITLE SURVEY

LEGAL DESCRIPTION

(CHICAGO TITLE COMPANY ORDER NO. 00132022-993-SD2-CFU DATED MARCH 26, 2021)

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

PARCEL 1:

ALL THAT CERTAIN TRACT OF LAND SITUATED, LYING AND BEING IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF CENTRAL AVENUE AND FOURTH STREET; THENCE SOUTH 87° 5' 30" EAST ALONG THE NORTHERLY LINE OF FOURTH STREET, 215 FEET; THENCE NORTH 2° 54' 30" EAST ON A LINE PARALLEL WITH AND 215 FEET DISTANT EASTERLY FROM THE EAST LINE OF SAID CENTRAL AVENUE, A DISTANCE OF 244 FEET; THENCE NORTH 87° 5' 30" WEST ON A LINE PARALLEL WITH AND 244 FEET DISTANT NORTHERLY FROM THE NORTH LINE OF SAID FOURTH STREET 215 FEET TO A POINT IN THE EAST LINE OF SAID CENTRAL AVENUE; THENCE SOUTH 2° 54' 30" WEST ALONG THE EAST LINE OF CENTRAL AVENUE, 244 FEET TO THE POINT OF BEGINNING

EXCEPT THEREFROM THAT PORTION THEREOF DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF CENTRAL AVENUE AND FOURTH STREET; THENCE ALONG THE NORTH LINE OF FOURTH STREET, SOUTH 87° 5' 30" EAST 201.05 FEET; THENCE PARALLEL WITH THE EAST LINE OF CENTRAL AVENUE, NORTH 2° 54' 30" EAST 101.40 FEET; THENCE WESTERLY 201.05 FEET TO A POINT IN THE EAST LINE OF CENTRAL AVENUE, DISTANT NORTH 2° 54' 30" EAST 101.30 FEET FROM THE POINT OF BEGINNING; THENCE ALONG SAID EAST LINE, SOUTH 2° 54' 30" WEST 101.30 FEET TO THE POINT OF BEGINNING.

PARCEL 2:

THAT TRACT OF LAND SITUATED IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF CENTRAL AVENUE AND FOURTH STREET, AS SAID STREETS ARE SHOWN ON THE MAP OF THE WOLFSKILL ORCHARD TRACT, RECORDED IN BOOK 30 PAGES 9 TO 13 INCLUSIVE OF MISCELLANEOUS RECORDS OF SAID COUNTY RECORDER; THENCE ALONG THE NORTH LINE OF FOURTH STREET, SOUTH 87° 5' 30" EAST 201.05 FEET; THENCE PARALLEL WITH THE EAST LINE OF CENTRAL AVENUE, NORTH 2° 54' 30" EAST 101.40 FEET; THENCE WESTERLY 201.05 FEET TO A POINT IN EAST LINE OF CENTRAL AVENUE, DISTANT NORTH 2° 54' 30" EAST 101.30 FEET FROM THE POINT OF BEGINNING; THENCE ALONG SAID EAST LINE, SOUTH 2° 54' 30" WEST 101.30 FEET TO THE POINT OF BEGINNING.

PARCEL 3:

THAT PORTION OF FOURTH STREET SHOWN 80 FEET WIDE ON THE MAP OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, RECORDED IN BOOK 30 PAGES 9 TO 13 INCLUSIVE OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY LINE OF SAID FOURTH STREET WITH THE WESTERLY LINE OF THAT LAND CONVEYED TO SOUTHERN PACIFIC RAILROAD COMPANY, IN DEED RECORDED IN BOOK 1686 PAGE 157 OF DEEDS, IN THE OFFICE OF SAID COUNTY RECORDER; THENCE SOUTHERLY ALONG THE SOUTHERLY PROLONGATION OF SAID WESTERLY LINE TO A LINE EXTENDING NORTH 74° 32' 16" WEST FROM A POINT IN THE EASTERLY LINE OF THE SOUTHERN PACIFIC RAILROAD COMPANY'S ARCADE DEPOT GROUNDS, AS PER MAP RECORDED IN BOOK 630 PAGE 191 OF DEEDS, SAID POINT BEING DISTANT SOUTH 0° 00' 45" WEST ALONG SAID EASTERLY LINE 29.78 FEET FROM THE SOUTHERLY LINE OF SAID FOURTH STREET; THENCE NORTH 74° 32' 16" WEST TO SAID NORTHERLY LINE OF FOURTH STREET; THENCE EASTERLY ALONG SAID NORTHERLY LINE TO THE POINT OF BEGINNING.

EXCEPT ALL MINERALS AND ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES CONTAINED THEREIN AND THEREUNDER WITHOUT THE RIGHT TO PENETRATE THE SURFACE OF OR TO ENTER UPON SAID REAL PROPERTY WITHIN 500 FEET OF THE SURFACE THEREOF TO EXTRACT THE SAME, AS RESERVED BY THE CITY OF LOS ANGELES IN THE DEED RECORDED APRIL 1, 1959 AS INSTRUMENT NO. 1748, IN BOOK D-423 PAGE 617, OFFICIAL RECORDS.

APN(S): 5147-001-007

PARCEL 4:

THAT PORTION OF BLOCK 13 OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30, PAGES 9 TO 13, INCLUSIVE, OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND THAT PORTION OF THAT CERTAIN STREET, 100 FEET WIDE, AS SHOWN ON SAID MAP, NOW VACATED, TOGETHER WITH THAT PORTION OF THAT CERTAIN PARCEL OF LAND IN SAID CITY, COUNTY AND STATE DESCRIBED IN THE DEED TO THE SOUTHERN PACIFIC RAILROAD COMPANY, RECORDED IN BOOK 19278, PAGE 136, OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER, BEING MORE PARTICULARLY DESCRIBED AS A WHOLE AS FOLLOWS:

BEGINNING AT A POINT IN THE SOUTHERLY PROLONGATION OF THE WESTERLY LINE OF SAID BLOCK 13, DISTANT SOUTHERLY (MEASURED ALONG SAID PROLONGATION AND ALONG SAID WESTERLY LINE) THEREON 202.63 FEET FROM THE SOUTHWEST CORNER OF LOT 9 IN SAID BLOCK 13, SAID POINT OF BEGINNING BEING ALSO A POINT IN THE EASTERLY LINE OF CENTRAL AVENUE; THENCE ALONG SAID PROLONGATION AND ALONG SAID WESTERLY LINE NORTH 02° 55' 00" EAST 665.77 FEET, MORE OR LESS, TO THE SOUTHERLY LINE OF THE LAND FIRST DESCRIBED IN THE DEED TO THE CITY OF LOS ANGELES, RECORDED ON JUNE 21, 1957 AS INSTRUMENT NO. 4213, IN BOOK 54856, PAGE 105 OF SAID OFFICIAL RECORDS; THENCE ALONG THE SOUTHERLY BOUNDARY OF THE LAND DESCRIBED IN SAID LAST MENTIONED DEED AS FOLLOWS:

NORTH 55° 36' 46" EAST 12.11 FEET; SOUTH 71° 37' 14" EAST 395.17 FEET AND SOUTH 34° 21' 02" EAST 15.87 FEET TO A POINT IN THE EASTERLY LINE OF THE LAND DESCRIBED IN SAID DEED TO THE SOUTHERN PACIFIC RAILROAD COMPANY, SAID LAST MENTIONED EASTERLY LINE BEING ALSO THE WESTERLY LINE OF ALAMEDA STREET; THENCE ALONG SAID LAST MENTIONED EASTERLY LINE SOUTH 02° 55' 31" WEST 337.31 FEET TO SOUTHEASTERLY CORNER OF THE LAND DESCRIBED IN THE DEED TO THE CALIFORNIA CONSUMERS CORPORATION, RECORDED NOVEMBER 16, 1956, AS INSTRUMENT NO. 1981, IN BOOK 52870, PAGE 78 OF OFFICIAL RECORDS; THENCE CONTINUING ALONG SAID LAST MENTIONED EASTERLY LINE, SOUTH 02° 55' 31" WEST 249.80 FEET; THENCE IN A STRAIGHT LINE, NORTH 87° 05' 00" WEST 400.03 FEET TO THE POINT IN THE SOUTHERLY PROLONGATION OF THE WESTERLY LINE OF SAID BLOCK 13; THENCE ALONG SAID WESTERLY LINE, NORTH 02° 55' 00" EAST 32.00 FEET TO THE POINT OF BEGINNING.

EXCEPT THEREFROM THE TITLE AND EXCLUSIVE RIGHT TO ALL THE MINERALS AND MINERAL ORES OF EVERY KIND AND CHARACTER NOW KNOWN TO EXIST OR HEREAFTER DISCOVERED UPON, WITHIN OR UNDERLYING SAID LAND OR THAT MAY BE PRODUCED THEREFROM INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ALL PETROLEUM, OIL, NATURAL GAS AND OTHER HYDROCARBON SUBSTANCES AND PRODUCTS DERIVED THEREFROM, TOGETHER WITH THE EXCLUSIVE AND PERPETUAL RIGHT OF INGRESS AND EGRESS BENEATH THE SURFACE OF SAID LAND TO EXPLORE FOR, EXTRACT, MINE AND REMOVE THE SAME, AND TO MAKE SUCH USE OF THE SAID LAND BENEATH THE SURFACE AS IS NECESSARY OR USEFUL IN CONNECTION THEREWITH, WHICH USE MAY INCLUDE LATERAL OR SLANT DRILLING, BORING, DIGGING OR SINKING OF WELLS, SHAFTS OR TUNNELS; WITHOUT, HOWEVER, THE RIGHT TO (A) USE THE SURFACE OF SAID LAND IN THE EXERCISE OF ANY OF SAID RIGHTS, AND (B) DISTURB THE SURFACE OF SAID LAND OR ANY IMPROVEMENTS THEREON OR REMOVE OR IMPAIR THE LATERAL OR SUBJACENT SUPPORT OF SAID LAND OR ANY IMPROVEMENTS THEREON, AS RESERVED BY SOUTHERN PACIFIC COMPANY, A CORPORATION, IN DEED RECORDED JUNE 1, 1956 AS INSTRUMENT NO. 1870, AND IN DEED RECORDED 11-161956 AS INSTRUMENT NO. 1981.

PARCEL 5:

A PERPETUAL EXCLUSIVE EASEMENT AS SET FORTH IN EASEMENT AGREEMENT RECORDED FEBRUARY 28, 1994 AS INSTRUMENT NO. 94-403391, OFFICIAL RECORDS

APN: 5147-013-016

PARCEL 6:

LOT 24 IN BLOCK 11 OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGES 9, ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 7:

LOTS 25 AND 26 IN BLOCK 11 OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGES 9, ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

PARCEL 8:

THAT PORTION OF LOT 27 IN BLOCK 11 OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGES 9, ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 27; THENCE SOUTH 2 DEGREES 55 MINUTES WEST 23.19 FEET ALONG THE WEST LINE OF CENTRAL AVENUE; THENCE NORTH 84 DEGREES 25 MINUTES WEST 64.70 FEET; THENCE NORTH 71 DEGREES 42 MINUTES WEST 55.95 FEET TO THE WEST LINE OF SAID LOT 27; THENCE NORTH 36 DEGREES 48 MINUTES EAST 6.50 FEET ALONG THE WEST LINE OF SAID LOT TO THE NORTHWEST CORNER OF SAID LOT 27; THENCE ALONG THE NORTH LINE OF SAID LOT, SOUTH 87 DEGREES 5 MINUTES EAST 114.81 FEET TO THE POINT OF BEGINNING.

LEGAL DESCRIPTION (CONT.)

(CHICAGO TITLE COMPANY ORDER NO. 00132022-993-SD2-CFU DATED MARCH 26, 2021)

PARCEL 9:

LOTS 27 AND 28 IN BLOCK 11 OF THE WOLFSKILL ORCHARD TRACT, IN THE CITY OF LOS ANGELES, COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 30 PAGES 9, ET SEQ., OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT THAT PORTION OF SAID LOT 27, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 27; THENCE SOUTH 2 DEGREES 55 MINUTES WEST 23.19 FEET ALONG THE WEST LINE OF CENTRAL AVENUE; THENCE NORTH 84 DEGREES 25 MINUTES WEST 64.70 FEET; THENCE NORTH 71 DEGREES 42 MINUTES WEST 55.95 FEET TO THE WEST LINE OF SAID LOT 27; THENCE NORTH 36 DEGREES 48 MINUTES EAST 6.50 FEET ALONG THE WEST LINE OF SAID LOT TO THE NORTHWEST CORNER OF SAID LOT 27; THENCE ALONG THE NORTH LINE OF SAID LOT, SOUTH 87 DEGREES 5 MINUTES EAST 114.81 FEET TO THE POINT OF BEGINNING.

5147-011-015, 016, 017;, 5147-012-015

EXCEPTIONS

(CHICAGO TITLE COMPANY ORDER NO. 00132022-993-SD2-CFU DATED MARCH 26, 2021)

MATTERS AFFECTING PARCELS 1, 2 AND 3

1. INTENTIONALLY OMITTED

2. ANY RIGHT AND PRIVILEGE TO USE, MAINTAIN AND OPERATE THE EXISTING TRACKS NOW TRAVERSING SAID LAND THAT THE OWNERS OF THE LAND ADJOINING MAY HAVE AS INFERRED IN THAT CERTAIN AGREEMENT BETWEEN THE CITY OF LOS ANGELES AND SOUTHERN PACIFIC COMPANY, A CORPORATION, RECORDED IN BOOK 51256, PAGE 200, OFFICIAL RECORDS.

   AFFECTS: PARCEL 3

   (NOT PLOTTABLE – MAY STILL AFFECT PARCEL 3 IF PUBLIC UTILITIES EXIST ON SAID PARCEL)

3. ANY RIGHTS, INTEREST AND USES OF SAID LAND AS HAVE HERETOFORE BEEN GRANTED BY THE CITY OF LOS ANGELES, FOR THE USE THEREOF AND THOSE WHICH AS A MATTER OF LAW ARE CONTINUING FOLLOWING STATUTORY STREET VACATION PROCEEDINGS, AS RESERVED BY SAID CITY IN ORDINANCE 111,151, AND BY DEED FROM THE CITY OF LOS ANGELES

   RECORDING DATE: APRIL 7, 1959
   RECORDING NO: 1748, IN BOOK D423, PAGE 617, OFFICIAL RECORDS

   AFFECTS: PARCEL 3

4. EASEMENTS FOR WATER AND POWER FACILITIES AS RESERVED TO CITY OF LOS ANGELES, AND THE RIGHT OF THE DEPARTMENT OF WATER AND POWER OF SAID CITY TO MAINTAIN AND OPERATE THE SAME, AS RESERVED BY ORDINANCE 109,349 AND ORDINANCE 111,151, AND ALSO AS RECITED ON THAT CERTAIN STREET VACATION MAP, RECORDED IN BOOK 5, PAGE 80 OF STREET VACATION MAPS, AND IN THE DEED FROM THE CITY OF LOS ANGELES

   RECORDING DATE: APRIL 7, 1959
   RECORDING NO: 1748, IN BOOK D423, PAGE 617, OFFICIAL RECORDS.

   AFFECTS: PARCEL 3

5. AN OIL AND GAS LEASE FOR THE TERM THEREIN PROVIDED WITH CERTAIN COVENANTS, CONDITIONS AND PROVISIONS, TOGETHER WITH EASEMENTS, IF ANY, AS SET FORTH THEREIN.

   DATED: JUNE 17, 1966
   LESSOR: CALIFORNIA CONSUMERS CORPORATION
   LESSEE: STANDARD OIL COMPANY OF CALIFORNIA, A CORPORATION
   RECORDING DATE: NOVEMBER 14, 1966
   RECORDING NO: 2293, IN BOOK M2388, PAGE 172, OFFICIAL RECORDS

   SAID LEASE AFFECTS THAT PORTION OF SAID LAND LYING BELOW A DEPTH OF 500 FEET FROM THE SURFACE THEREOF.

   SAID LEASE PROVIDES FOR NO RIGHT OF SURFACE ENTRY.

   NO INSURANCE IS MADE AS TO THE PRESENT OWNERSHIP OF THE LEASEHOLD CREATED BY SAID LEASE, NOR AS TO OTHER MATTERS AFFECTING THE RIGHTS OR INTERESTS OF THE LESSOR OR LESSEE IN SAID LEASE.

   AFFECTS: PARCEL 1

6. AN OIL AND GAS LEASE FOR THE TERM THEREIN PROVIDED WITH CERTAIN COVENANTS, CONDITIONS AND PROVISIONS, TOGETHER WITH EASEMENTS, IF ANY, AS SET FORTH THEREIN.

   DATED: JUNE 17, 1966
   LESSOR: LOS ANGELES COLD STORAGE COMPANY
   LESSEE: STANDARD OIL COMPANY OF CALIFORNIA, A CORPORATION
   RECORDING DATE: NOVEMBER 14, 1966
   RECORDING NO: 2293, IN BOOK M2388, PAGE 172, OFFICIAL RECORDS

   SAID LEASE AFFECTS THAT PORTION OF SAID LAND LYING BELOW A DEPTH OF 500 FEET FROM THE SURFACE THEREOF.

   SAID LEASE PROVIDES FOR NO RIGHT OF SURFACE ENTRY.

   NO INSURANCE IS MADE AS TO THE PRESENT OWNERSHIP OF THE LEASEHOLD CREATED BY SAID LEASE, NOR AS TO OTHER MATTERS AFFECTING THE RIGHTS OR INTERESTS OF THE LESSOR OR LESSEE IN SAID LEASE.

   AFFECTS: PARCEL 2

7. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT"

   EXECUTED BY: GERALD RAUCH AND MORRIS GLESEY
   IN FAVOR OF: CITY OF LOS ANGELES
   RECORDING DATE: FEBRUARY 27, 1969
   RECORDING NO: 2124, IN BOOK M3128, PAGE 833, OFFICIAL RECORDS

   WHICH AMONG OTHER THINGS PROVIDES: REGARDING MAINTENANCE OF OFF-STREET PARKING SPACE

   REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

   THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

   (NOT PLOTTED – APPEARS TO BURDEN PARCELS 1 & 2 AND BENEFIT PARCEL 4)

8. INTENTIONALLY OMITTED.

9. INTENTIONALLY OMITTED.

10. COVENANT AND AGREEMENT WHEREIN THE OWNERS AGREE TO HOLD SAID LAND AS ONE PARCEL AND NOT TO SELL ANY PORTION THEREOF SEPARATELY. SAID COVENANT IS EXPRESSED TO RUN WITH THE LAND AND BE BINDING UPON FUTURE OWNERS.

    RECORDING DATE: JUNE 14, 1988
    RECORDING NO.: 88-943401, OFFICIAL RECORDS

    REFERENCE IS MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

11. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT REGARDING MAINTENANCE OF BUILDING"

    EXECUTED BY: STANDARD-SOUTHERN CORPORATION
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: NOVEMBER 3, 1994
    RECORDING NO: 94-1995114, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

12. A NOTICE THAT SAID LAND IS INCLUDED WITHIN A PROJECT AREA OF THE REDEVELOPMENT AGENCY SHOWN BELOW, AND THAT PROCEEDINGS FOR THE REDEVELOPMENT OF SAID PROJECT HAVE BEEN INSTITUTED UNDER THE REDEVELOPMENT LAW (SUCH REDEVELOPMENT TO PROCEED ONLY AFTER THE ADOPTION OF THE REDEVELOPMENT PLAN) AS DISCLOSED BY A DOCUMENT

    RECORDING DATE: NOVEMBER 30, 2007
    RECORDING NO: 20072636425, OFFICIAL RECORDS
    REDEVELOPMENT AGENCY: CENTRAL INDUSTRIAL REDEVELOPMENT PROJECT AREA

    (NOT PLOTTED – APPEARS TO AFFECT PARCELS 1-3 AND 6-9)

EXCEPTIONS (CONT.)

(CHICAGO TITLE COMPANY ORDER NO. 00132022-993-SD2-CFU DATED MARCH 26, 2021)

MATTERS AFFECTING PARCELS 4 AND 5

12a ANY RIGHTS, INTERESTS, OR CLAIMS WHICH MAY EXIST OR ARISE BY REASON OF THE FOLLOWING MATTERS DISCLOSED BY SURVEY,

PROJECT NO.: 2000500
DATED: SEPTEMBER 14, 2020
PREPARED BY: CHRISTOPHER JONES, LS 8193 FOR KPFF
MATTERS SHOWN: A) ENCROACHMENT OF THE BUILDING LOCATED ON THE LAND ONTO LAND ADJOINING ON THE NORTH BY 0.28' ON THE WEST TO 0.21' ON THE EAST
b) ENCROACHMENT OF A PORTION OF THE BUILDING LOCATED ON THE LAND ONTO THE EASEMENT SHOWN ABOVE IN EXCEPTION NO. 3 AND 4

MATTERS AFFECTING PARCELS 4 AND 5

13. INTENTIONALLY OMITTED.

14. AN INSTRUMENT ENTITLED "AGREEMENT"

    EXECUTED BY: CALIFORNIA CONSUMES CORPORATION
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: SEPTEMBER 27, 1957
    RECORDING NO: 3197, IN BOOK 55720, PAGE 287, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

15. A COVENANT AND AGREEMENT UPON AND SUBJECT TO THE TERMS AND CONDITIONS THEREIN

    EXECUTED BY: CALIFORNIA CONSUMERS CORPORATION
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: SEPTEMBER 27, 1957
    RECORDING NO: 3198, BOOK 55720, PAGE 224, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

⟨16⟩ AN IRREVOCABLE OFFER TO DEDICATE AN EASEMENT OVER A PORTION OF SAID LAND FOR

PURPOSE(S): PUBLIC STREET
RECORDING DATE: MARCH 30, 1964
RECORDING NO: 5388, OFFICIAL RECORDS
AFFECTS: THAT PORTION OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN DEED TO THE SOUTHERN PACIFIC RAILROAD COMPANY RECORDED IN BOOK 19278 PAGE 136 OF OFFICIAL RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID LOS ANGELES COUNTY, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHERLY CORNER OF THE LAND DESCRIBED IN SAID DEED; THENCE NORTH 55 DEGREES 34 MINUTES WEST ALONG THE NORTHERLY LINE OF 6TH STREET TO A LINE PARALLEL WITH AND DISTANT 10 FEET WESTERLY MEASURED AT RIGHT ANGLES FROM THE WESTERLY LINE OF ALAMEDA STREET; THENCE NORTHERLY ALONG SAID PARALLEL LINE TO A LINE HAVING A BEARING OF NORTH 87 DEGREES 05 MINUTES 20 SECONDS WEST AND PASSING THROUGH A POINT IN THE WESTERLY LINE OF ALAMEDA STREET, SAID POINT BEING DISTANT NORTH 2 DEGREES 55 MINUTES EAST 1212.38 FEET FROM THE POINT OF BEGINNING; THENCE SOUTH 87 DEGREES 05 MINUTES 20 SECONDS EAST ALONG SAID LINE HAVING A BEARING OF NORTH 87 DEGREES 05 MINUTES 20 SECONDS WEST TO SAID WESTERLY LINE OF ALAMEDA STREET; THENCE SOUTH 2 DEGREES 55 MINUTES WEST 1212.38 FEET ALONG SAID LAST MENTIONED WESTERLY LINE TO THE POINT OF BEGINNING

SAID OFFER WAS ACCEPTED BY RESOLUTION, A CERTIFIED COPY OF WHICH WAS RECORDED JUNE 4, 1964 AS INSTRUMENT NO. 6731, OFFICIAL RECORDS.

17. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT REGARDING MAINTENANCE OF YARDS FOR AN OVER-SIZED BUILDINGS"

    EXECUTED BY: LOS ANGELES COLD STORAGE CO.
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: FEBRUARY 27, 1969
    RECORDING NO: 2123, IN BOOK M3128, PAGE 82, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

18. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT REGARDING MAINTENANCE OF OF-STREET PARKING SPACE

    EXECUTED BY: LOS ANGELES COLD STG. CO.
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: FEBRUARY 27, 1969
    RECORDING NO: 2124, IN BOOK M3128, PAGE 833, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

    (NOT PLOTTED – APPEARS TO BURDEN PARCELS 1 & 2 AND BENEFIT PARCEL 4)

⟨19⟩ AN IRREVOCABLE OFFER TO DEDICATE AN EASEMENT OVER A PORTION OF SAID LAND FOR

PURPOSE(S): CITY OF LOS ANGELES
RECORDING DATE: FEBRUARY 10, 1969
RECORDING NO: 3114, IN BOOK D4275, PAGE 397, OFFICIAL RECORDS
AFFECTS: THAT PORTION OF LOT 27, BLOCK 13, WOLFSKILL ORCHARD TRACT, AS PER MAP RECORDED IN BOOK 30, PAGES 9 TO 13 INCLUSIVE OF MISCELLANEOUS RECORDS, IN THE OFFICE OF THE COUNTY RECORDER OF LOS ANGELES COUNTY, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE NORTHERLY PROLONGATION OF THE WESTERLY LINE OF SAID LOT WITH THE WESTERLY PROLONGATION OF THE SOUTHERLY LINE OF FOURTH STREET AS SAID SOUTHERLY LINE IS DESCRIBED IN DEED RECORDED IN BOOK 54856, PAGE 105 OF OFFICIAL RECORDS, IN THE OFFICE OF SAID COUNTY RECORDER; THENCE SOUTH EASTERLY ALONG SAID SOUTHERLY LINE AND ITS WESTERLY PROLONGATION A DISTANCE OF 15 FEET; THENCE SOUTHWESTERLY IN A DIRECT LINE TO A POINT IN SAID WESTERLY LINE DISTANT 15 FEET SOUTHERLY, MEASURED ALONG SAID WESTERLY LINE AND ITS NORTHERLY PROLONGATION FROM THE POINT OF BEGINNING; THENCE NORTHERLY ALONG SAID WESTERLY LINE AND ITS NORTHERLY PROLONGATION TO THE POINT OF BEGINNING.

AND RECORDING DATE: MARCH 24, 1969
AND RECORDING NO: 3179, IN BOOK D4316, PAGE 872, OFFICIAL RECORDS

SAID OFFER WAS ACCEPTED BY RESOLUTION, A CERTIFIED COPY OF WHICH WAS RECORDED JUNE 6, 1969 AS INSTRUMENT NO. 3751, OFFICIAL RECORDS.

20. INTENTIONALLY OMITTED

21. INTENTIONALLY OMITTED

22. COVENANT AND AGREEMENT WHEREIN THE OWNERS AGREE TO HOLD SAID LAND AS ONE PARCEL AND NOT TO SELL ANY PORTION THEREOF SEPARATELY. SAID COVENANT IS EXPRESSED TO RUN WITH THE LAND AND BE BINDING UPON FUTURE OWNERS.

    RECORDING DATE: SEPTEMBER 30, 1994
    RECORDING NO.: 94-1795826, OFFICIAL RECORDS

    REFERENCE IS MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

23. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT REGARDING MAINTENANCE OF BUILDING"

    EXECUTED BY: STANDARD-SOUTHERN CORPORATION
    IN FAVOR OF: CITY OF LOS ANGELES
    RECORDING DATE: NOVEMBER 3, 1994
    RECORDING NO: 94-1995114, OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT SHALL RUN WITH THE LAND AND SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

EXCEPTIONS (CONT.)

(CHICAGO TITLE COMPANY ORDER NO. 00132022-993-SD2-CFU DATED MARCH 26, 2021)

MATTERS AFFECTING PARCELS 6, 7, 8 AND 9

24. INTENTIONALLY OMITTED.

25. AN INSTRUMENT ENTITLED "COVENANT AND AGREEMENT REGARDING MAINTENANCE OF OFF-STREET PARKING SPACE

    RECORDING DATE: APRIL 12, 1995
    RECORDING NO: 95-510843, OF OFFICIAL RECORDS

    REFERENCE IS HEREBY MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT PROVIDES THAT IT SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

26. COVENANT AND AGREEMENT WHEREIN THE OWNERS AGREE TO HOLD SAID LAND AS ONE PARCEL AND NOT TO SELL ANY PORTION THEREOF SEPARATELY. SAID COVENANT IS EXPRESSED TO RUN WITH THE LAND AND BE BINDING UPON FUTURE OWNERS.

    RECORDING DATE: APRIL 12, 1995
    RECORDING NO: 95-510844, OF OFFICIAL RECORDS

    REFERENCE IS MADE TO SAID DOCUMENT FOR FULL PARTICULARS.

    THIS COVENANT AND AGREEMENT PROVIDES THAT IT SHALL BE BINDING UPON ANY FUTURE OWNERS, ENCUMBRANCERS, THEIR SUCCESSORS OR ASSIGNS, AND SHALL CONTINUE IN EFFECT UNTIL THE ADVISORY AGENCY APPROVES TERMINATION.

27. INTENTIONALLY OMITTED

    NOT A SURVEY MATTER

28. WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT DISCLOSED BY THE PUBLIC RECORDS.

    NOT A SURVEY MATTER

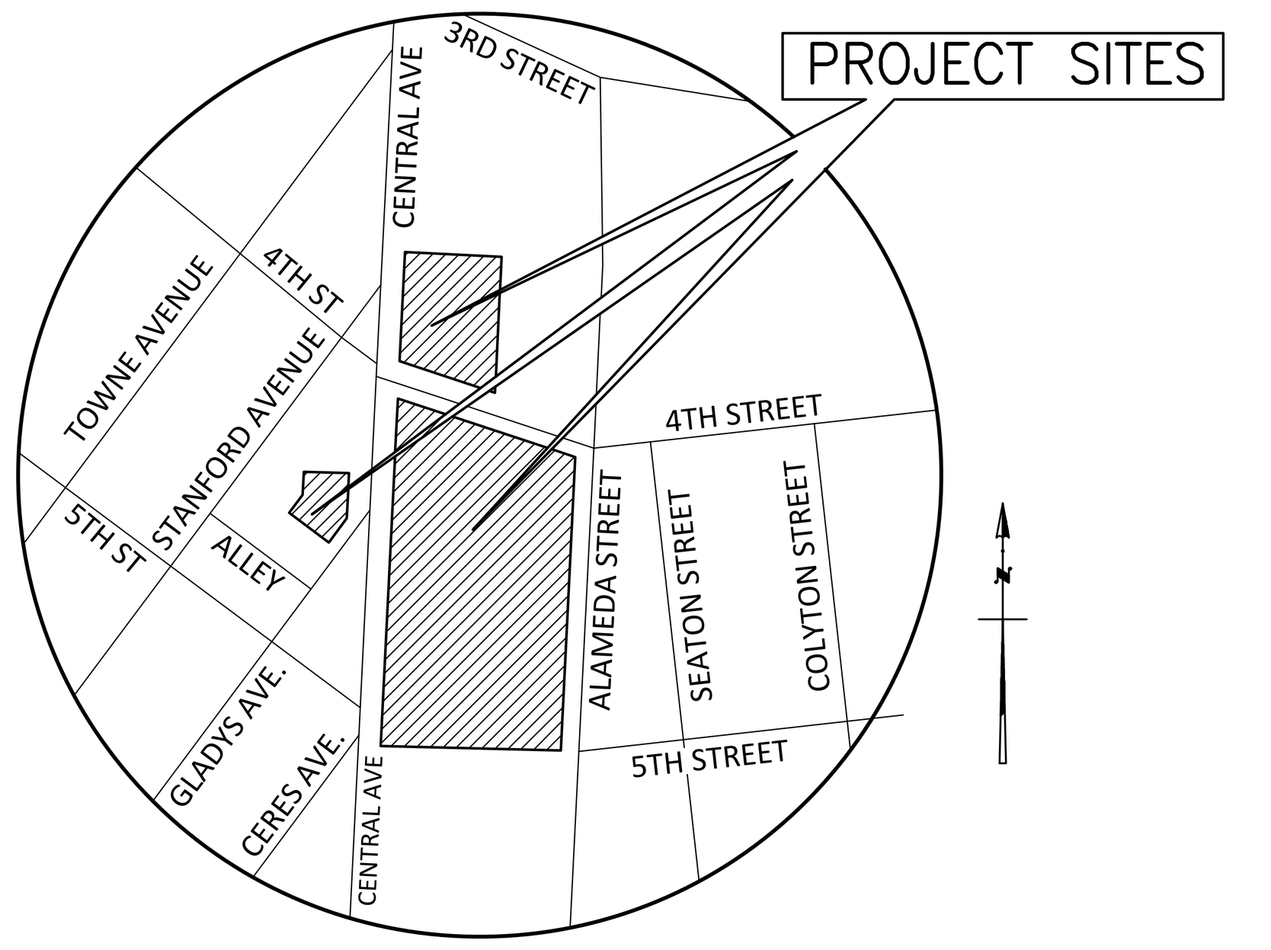
29. INTENTIONALLY OMITTED

30. 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.

    THE COMPANY WILL REQUIRE, FOR REVIEW, A FULL AND COMPLETE COPY OF ANY UNRECORDED AGREEMENT, CONTRACT, LICENSE AND/OR LEASE, TOGETHER WITH ALL SUPPLEMENTS, ASSIGNMENTS AND AMENDMENTS THERETO, BEFORE ISSUING ANY POLICY OF TITLE INSURANCE WITHOUT EXCEPTING THIS ITEM FROM COVERAGE.

    THE COMPANY RESERVES THE RIGHT TO EXCEPT ADDITIONAL ITEMS AND/OR MAKE ADDITIONAL REQUIREMENTS AFTER REVIEWING SAID DOCUMENTS.

    NOT A SURVEY MATTER



VICINITY MAP
(NOT TO SCALE)

COMMENTS

DATES OF SURVEY . . . OCTOBER & NOVEMBER 2019, JULY 2020

SITE ADDRESS . . . . 427, 431, 433 S. CENTRAL AVENUE, LOS ANGELES, CA 90013
410 S. CENTRAL AVENUE, LOS ANGELES, CA 90013
707 E. 4TH STREET, LOS ANGELES, CA 90013

APN NO. 5147-001-007, 5147-013-016, 5147-011-015, 5147-011-016, 5147-011-017, 5147-012-015

BOUNDARY LINES . . . WERE ESTABLISHED FROM THE RECOVERED CITY, COUNTY AND/OR PRIVATE ENGINEER MONUMENTS WHOSE CHARACTER AND SOURCE ARE SO NOTED ON THE SURVEY.

BASIS OF BEARINGS . . THE BEARING OF N02°48'41"E ALONG THE CENTERLINE OF CENTRAL AVENUE AS SHOWN ON PARCEL MAP L.A. NO. 5683, AS FILED IN PARCEL MAP BOOK 184, PAGES 50& 51, WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS SURVEY.

BENCHMARK . . BM: 12-05072

WIRE SPK IN E CURB CENTRAL AVE; 11.6FT N OF C CURB RETURN N OF 4TH ST; N END CB

EL: 260.354 NAVD 1988 ; RECORDED: 2000

⟨#⟩ . . . . INDICATES TITLE COMMITMENT SCHEDULE B-2 EXCEPTION NUMBER PLOTTED HEREON.

LAND AREA . . GROSS AREA

707 E. 4TH ST.: 58,644 SQ. FT., OR 1.346 ACRES, MORE OR LESS

410 S. CENTRAL AVE.: 260,916 SQ. FT., OR 5.990 ACRES, MORE OR LESS

431, 427, 433 S. CENTRAL AVE.: 14,043 SQ. FT., OR 0.322 ACRES, MORE OR LESS

TOTAL: 333,603 SQ. FT., OR 7.658 ACRES, MORE OR LESS

NET AREA (POST-DEDICATIONS)

707 E. 4TH ST.: 58,644 SQ. FT., OR 1.346 ACRES, MORE OR LESS

410 S. CENTRAL AVE.: 252,382 SQ. FT., OR 5.794 ACRES, MORE OR LESS

431, 427, 433 S. CENTRAL AVE.: 14,043 SQ. FT., OR 0.322 ACRES, MORE OR LESS

TOTAL: 325,069 SQ. FT., OR 7.462 ACRES, MORE OR LESS

UTILITIES . . . . ALL VISIBLE ABOVE-GROUND UTILITY FEATURES SHOWN ON THIS MAP WERE OBTAINED BY CONVENTIONAL MEANS. ABOVE-GROUND UTILITIES WERE COMBINED WITH CITY OF LA SUBSTRUCTURE MAPS TO PLOT UNDERGROUND UTILITY LINES SHOWN HEREON. NO REPRESENTATION IS MADE AS TO THE COMPLETENESS OF SAID UTILITY INFORMATION AND ANY USER OF THIS INFORMATION SHOULD CONTACT THE UTILITY OR GOVERNMENT AGENCY DIRECTLY.

PARKING . . . . THERE ARE APPROXIMATELY 139 PARKING SPACES LOCATED WITHIN THE PROPERTIES IN QUESTION, 3 SPACES BEING DESIGNATED AS HANDICAP ACCESSIBLE

707 E. 4TH ST.: 20 TRUCK LOADING DOCKS

410 S. CENTRAL AVE.: 33 PARKING SPACES, 47 TRUCK LOADING DOCKS AND 1 HANDICAP ACCESSIBLE

431, 427, 433 S. CENTRAL AVE.: 39 PARKING SPACES, 2 HANDICAP ACCESSIBLE

FLOOD INSURANCE RATE MAP. . . . . . . ZONE "X" AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PER FLOOD INSURANCE RATE MAP (FIRM) MAP PANEL MAP NO. 06037C1636G EFFECTIVE DATE DECEMBER 21, 2018.

ZONING INFORMATION . M2-2D-O; INFORMATION FROM ZIMAS.LACITY.ORG ON 07/20/2020

M2-2D; INFORMATION FROM ZIMAS.LACITY.ORG ON 07/20/2020

SURVEYOR'S NOTES

NO OBSERVABLE EVIDENCE OF CEMETERY OR BURIAL GROUNDS ON SUBJECT PROPERTY.

NO OBSERVABLE EVIDENCE OF RECENT EARTH MOVING WORK OR BUILDING CONSTRUCTION.

NO OBSERVABLE EVIDENCE OF SITE USE AS A SOLID WASTE DUMP, SUMP OR SANITARY LANDFILL.

NO OBSERVABLE EVIDENCE OF STREAMS OR TRAILS ON SUBJECT PROPERTY.

THERE WERE NOT ANY DEMARCATIONS OF WETLAND AREAS ON THE SUBJECT PROPERTY AT THE TIME OF THE SURVEY.

SURVEYOR'S CERTIFICATE

TO (i) CP LA COLD STORAGE LAND, LLC, A COLORADO LIMITED LIABILITY COMPANY, (ii) STANDARD-SOUTHERN CORPORATION, A DELAWARE CORPORATION, (iii) RIVERWAY TITLE COMPANY, (iv) CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 5, 6(a), 7(a), 7(b)(1), 7c, 8, 9, 11 (VISIBLE EVIDENCE ONLY), 13, 14, 16, 17, 19 AND 20 (PER CONTRACT TERMS) OF TABLE A THEREOF.

THE FIELD WORK WAS COMPLETED IN JULY 2020.

PREPARED UNDER THE DIRECTION OF:

04/21/2021

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

LICENSED LAND SURVEYOR · CHRISTOPHER M. JONES · No.8193 · STATE OF CALIFORNIA

NO.	DATE	REVISIONS
6		
5		
4		
3		
2		
1		

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

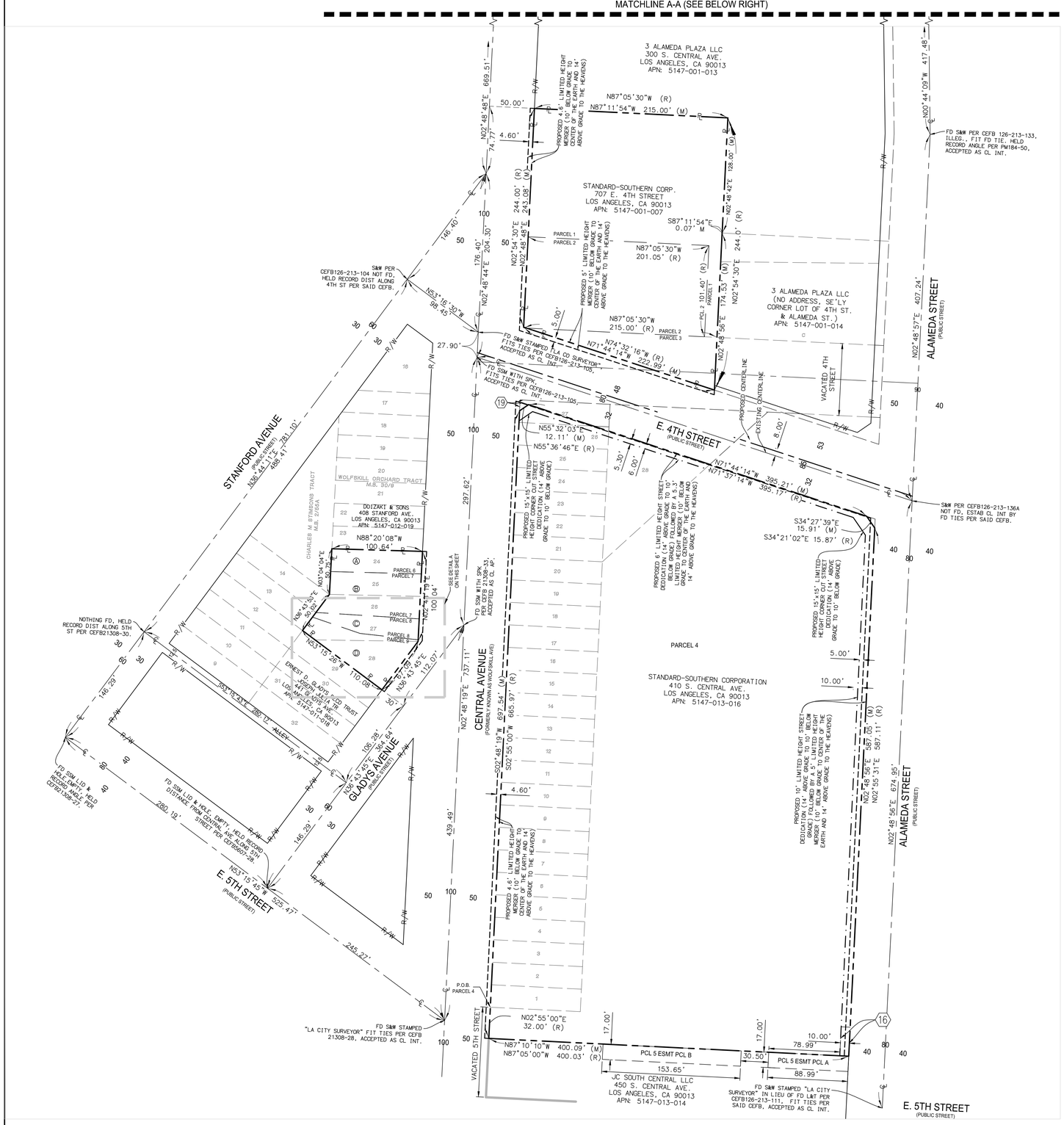
PREPARED FOR:

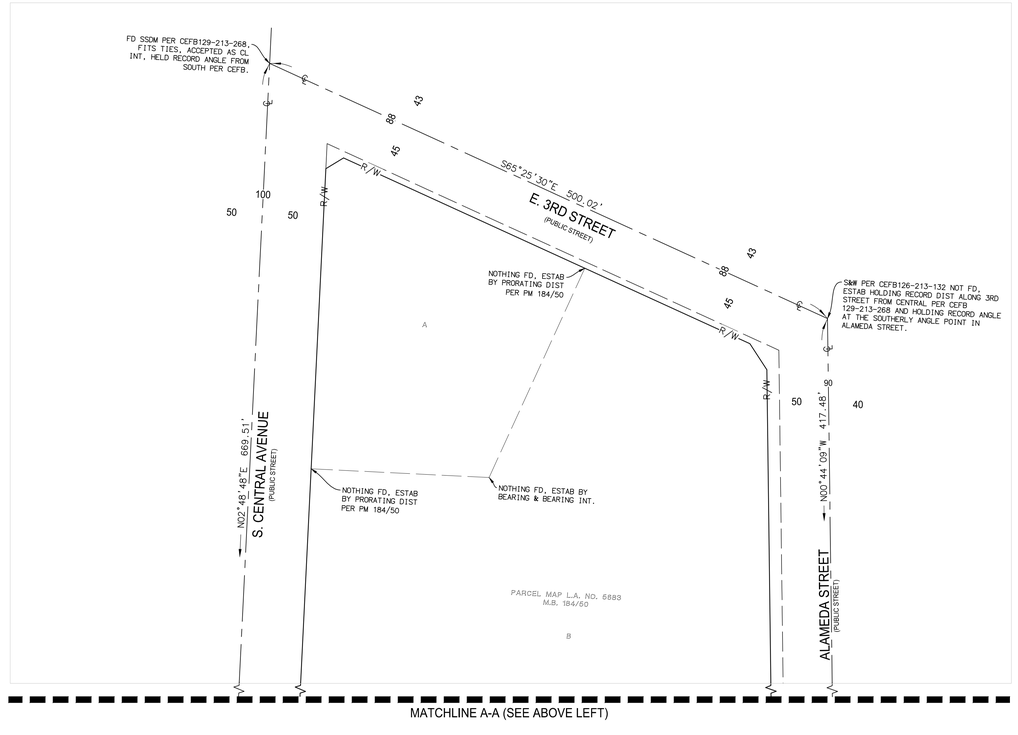
MR. ROGER PECSOK
CONTINUUM PARTNERS
1881 16TH STREET
DENVER, CO 80202

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

SHEET 1 OF 6

ALTA/NSPS LAND TITLE SURVEY
(PROPERTY-OVERALL)





LINETYPES

- PROPERTY LINE
- LOT LINE
- RIGHT OF WAY LINE
- CENTERLINE
- EASEMENT LINE

LEGEND

(M) . . . . . MEASURED IN THE FIELD

(R) . . . . . PER HISTORICAL DOCUMENTS

P.O.B. . . . . POINT OF BEGINNING

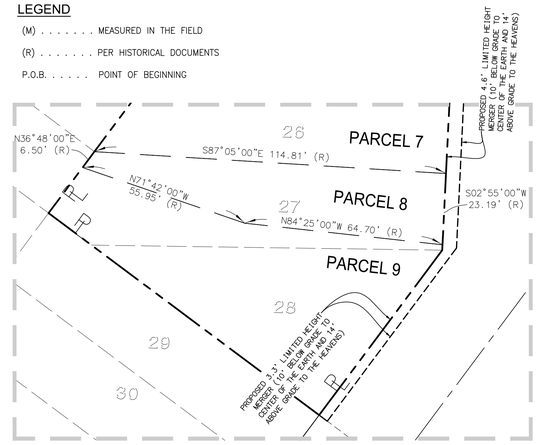
PROPERTY INFORMATION

Ⓐ STANDARD SOUTHERN CORP
431 S. CENTRAL AVE.
LOS ANGELES, CA 90013
APN: 5147-012-015

Ⓑ STANDARD SOUTHERN CORP
427 S. CENTRAL AVE.
LOS ANGELES, CA 90013
APN: 5147-011-015

Ⓒ STANDARD SOUTHERN CORP
431 S. CENTRAL AVE.
LOS ANGELES, CA 90013
APN: 5147-011-016

Ⓓ STANDARD SOUTHERN CORP
433 S. CENTRAL AVE.
LOS ANGELES, CA 90013
APN: 5147-011-017



DETAIL A
1" = 20'

N

0 25' 50'

SCALE: 1"=50'

NO.	DATE	REVISIONS
6		
5		
4		
3		
2		
1		

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

PREPARED FOR:

MR. ROGER PECSOK
CONTINUUM PARTNERS
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DENVER, CO 80202

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ALTA/NSPS LAND TITLE SURVEY

LEGEND

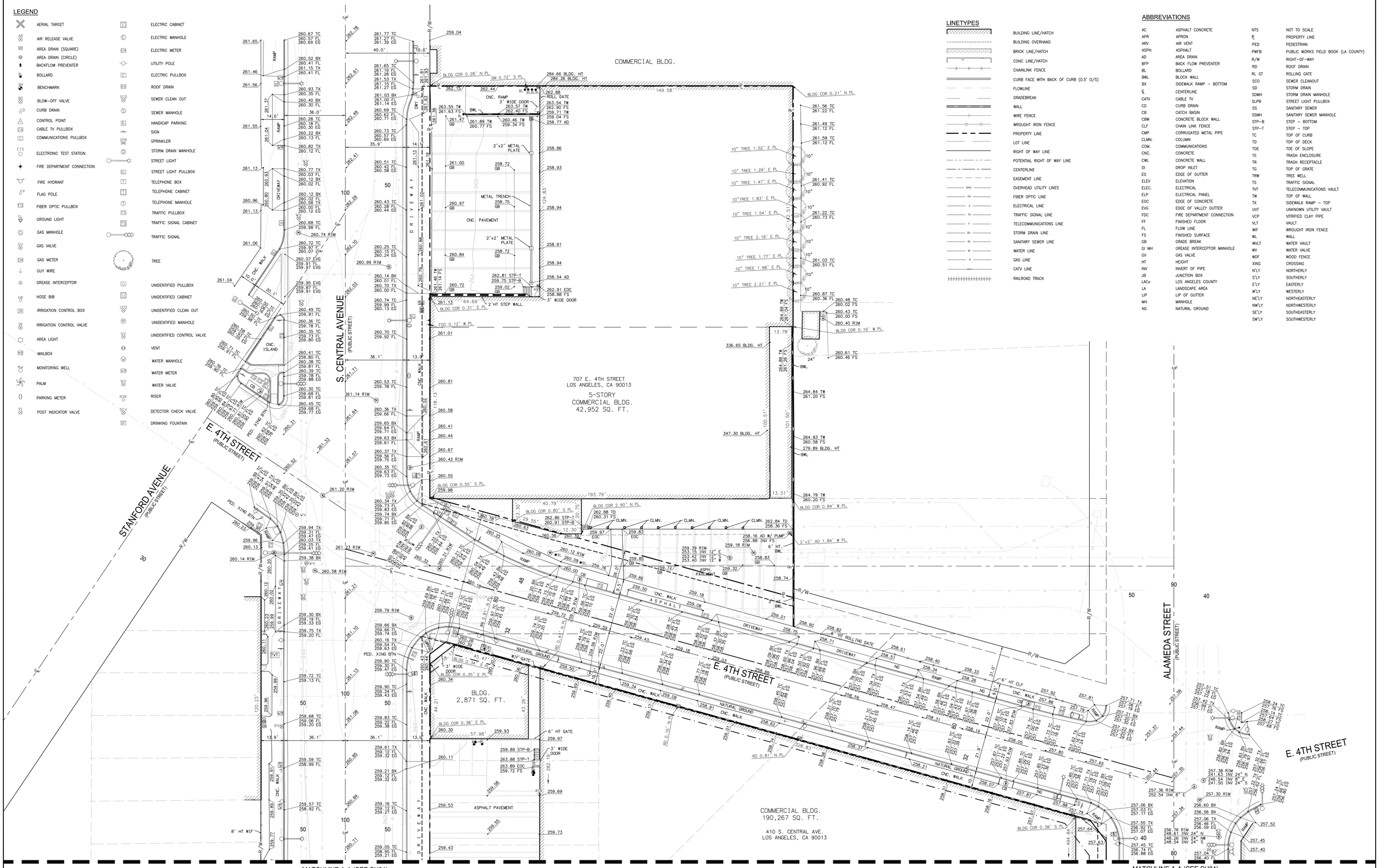
	AERIAL TARGET	E	ELECTRIC CABINET
ARV	AIR RELEASE VALVE	E	ELECTRIC MANHOLE
	AREA DRAIN (SQUARE)	EM	ELECTRIC METER
	AREA DRAIN (CIRCLE)		UTILITY POLE
	BACKFLOW PREVENTER	E	ELECTRIC PULLBOX
BM	BENCHMARK	RD	ROOF DRAIN
BFV	BLOW-OFF VALVE	SCO	SEWER CLEAN OUT
	CURB DRAIN	S	SEWER MANHOLE
	CONTROL POINT		HANDICAP PARKING
CA	CABLE TV PULLBOX		SIGN
C	COMMUNICATIONS PULLBOX	SPR	SPRINKLER
ETS	ELECTRONIC TEST STATION	STD	STORM DRAIN MANHOLE
	FIRE DEPARTMENT CONNECTION		STREET LIGHT
	FIRE HYDRANT	SL	STREET LIGHT PULLBOX
	FLAG POLE	T	TELEPHONE BOX
FO	FIBER OPTIC PULLBOX	T	TELEPHONE CABINET
GL	GROUND LIGHT	TS	TELEPHONE MANHOLE
GM	GAS MANHOLE	TS	TRAFFIC PULLBOX
GV	GAS VALVE	TS	TRAFFIC SIGNAL CABINET
GM	GAS METER		TRAFFIC SIGNAL
	GUY WIRE		TREE
	GREASE INTERCEPTOR	U	UNIDENTIFIED PULLBOX
HB	HOSE BIB	U	UNIDENTIFIED CABINET
IR	IRRIGATION CONTROL BOX	UCO	UNIDENTIFIED CLEAN OUT
IV	IRRIGATION CONTROL VALVE	M	UNIDENTIFIED MANHOLE
	AREA LIGHT	UV	UNIDENTIFIED CONTROL VALVE
MB	MAILBOX		VENT
MW	MONITORING WELL	WM	WATER MANHOLE
	PALM	WM	WATER METER
	PARKING METER	WV	WATER VALVE
PI	POST INDICATOR VALVE	RSR	RISER
DCV		DCV	DETECTOR CHECK VALVE
		DF	DRINKING FOUNTAIN

LINETYPES

- BUILDING LINE/HATCH
- BUILDING OVERHANG
- BRICK LINE/HATCH
- CONC LINE/HATCH
- CHAINLINK FENCE
- CURB FACE WITH BACK OF CURB (0.5' O/S)
- FLOWLINE
- GRADEBREAK
- WALL
- WIRE FENCE
- WROUGHT IRON FENCE
- PROPERTY LINE
- LOT LINE
- RIGHT OF WAY LINE
- POTENTIAL RIGHT OF WAY LINE
- CENTERLINE
- EASEMENT LINE
- OHU — OVERHEAD UTILITY LINES
- FO — FIBER OPTIC LINE
- E — ELECTRICAL LINE
- TS — TRAFFIC SIGNAL LINE
- T — TELECOMMUNICATIONS LINE
- SD — STORM DRAIN LINE
- SS — SANITARY SEWER LINE
- W — WATER LINE
- G — GAS LINE
- CATV — CATV LINE
- RAILROAD TRACK

ABBREVIATIONS

AC	ASPHALT CONCRETE	NTS	NOT TO SCALE
APR	APRON	℄	PROPERTY LINE
ARV	AIR VENT	PED	PEDESTRIAN
ASPH	ASPHALT	PWFB	PUBLIC WORKS FIELD BOOK (LA COUNTY)
AD	AREA DRAIN	R/W	RIGHT-OF-WAY
BFP	BACK FLOW PREVENTER	RD	ROOF DRAIN
BL	BOLLARD	RL GT	ROLLING GATE
BWL	BLOCK WALL	SCO	SEWER CLEANOUT
BX	SIDEWALK RAMP – BOTTOM	SD	STORM DRAIN
℄	CENTERLINE	SDMH	STORM DRAIN MANHOLE
CATV	CABLE TV	SLPB	STREET LIGHT PULLBOX
CD	CURB DRAIN	SS	SANITARY SEWER
CB	CATCH BASIN	SSMH	SANITARY SEWER MANHOLE
CBW	CONCRETE BLOCK WALL	STP–B	STEP – BOTTOM
CLF	CHAIN LINK FENCE	STP–T	STEP – TOP
CMP	CORRUGATED METAL PIPE	TC	TOP OF CURB
CLMN.	COLUMN	TD	TOP OF DECK
COM.	COMMUNICATIONS	TOE	TOE OF SLOPE
CNC.	CONCRETE	TE	TRASH ENCLOSURE
CWL	CONCRETE WALL	TR	TRASH RECEPTACLE
DI	DROP INLET	TG	TOP OF GRATE
EG	EDGE OF GUTTER	TRW	TREE WELL
ELEV	ELEVATION	TS	TRAFFIC SIGNAL
ELEC.	ELECTRICAL	TVT	TELECOMMUNICATIONS VAULT
ELP	ELECTRICAL PANEL	TW	TOP OF WALL
EOC	EDGE OF CONCRETE	TX	SIDEWALK RAMP – TOP
EVG	EDGE OF VALLEY GUTTER	UVT	UNKNOWN UTILITY VAULT
FDC	FIRE DEPARTMENT CONNECTION	VCP	VITRIFIED CLAY PIPE
FF	FINISHED FLOOR	VLT	VAULT
FL	FLOW LINE	WIF	WROUGHT IRON FENCE
FS	FINISHED SURFACE	WL	WALL
GB	GRADE BREAK	WVLT	WATER VAULT
GI MH	GREASE INTERCEPTOR MANHOLE	WV	WATER VALVE
GV	GAS VALVE	WDF	WOOD FENCE
HT	HEIGHT	XING	CROSSWALK
INV	INVERT OF PIPE	N'LY	NORTHERLY
JB	JUNCTION BOX	S'LY	SOUTHERLY
LACo	LOS ANGELES COUNTY	E'LY	EASTERLY
LA	LANDSCAPE AREA	W'LY	WESTERLY
LIP	LIP OF GUTTER	NE'LY	NORTHEASTERLY
MH	MANHOLE	NW'LY	NORTHWESTERLY
NG	NATURAL GROUND	SE'LY	SOUTHEASTERLY
		SW'LY	SOUTHWESTERLY



N

SCALE: 1"=20'

NO.	DATE	REVISIONS
6		
5		
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3		
2		
1		

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

PREPARED FOR:

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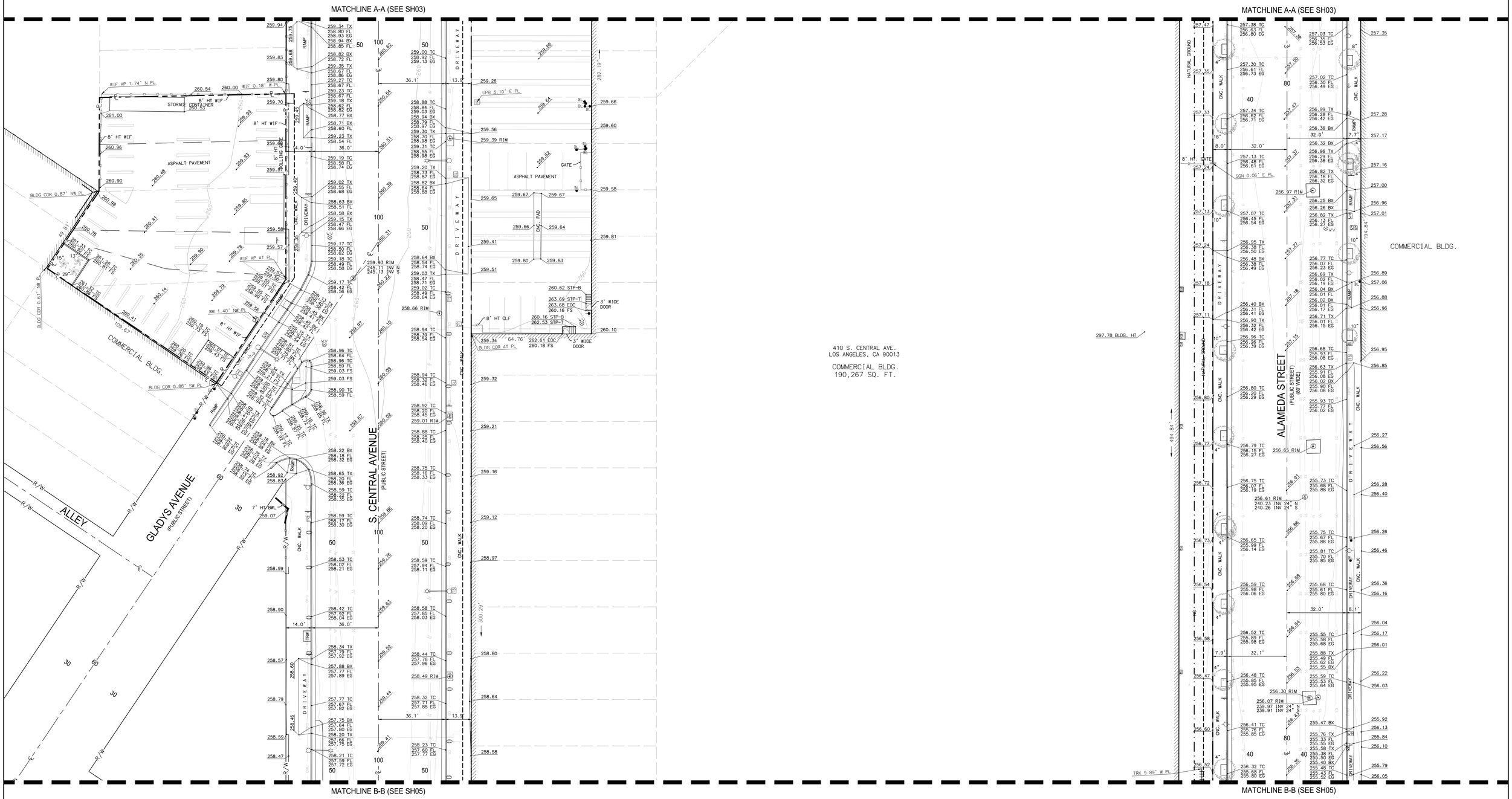
ALTA/NSPS LAND TITLE SURVEY



NO.	DATE	REVISIONS
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SCALE: 1"=20'

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

PREPARED FOR:

MR. ROGER PECSOK
CONTINUUM PARTNERS
1881 16TH STREET
DENVER, CO 80202

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700 FLOWER ST., Suite 2100
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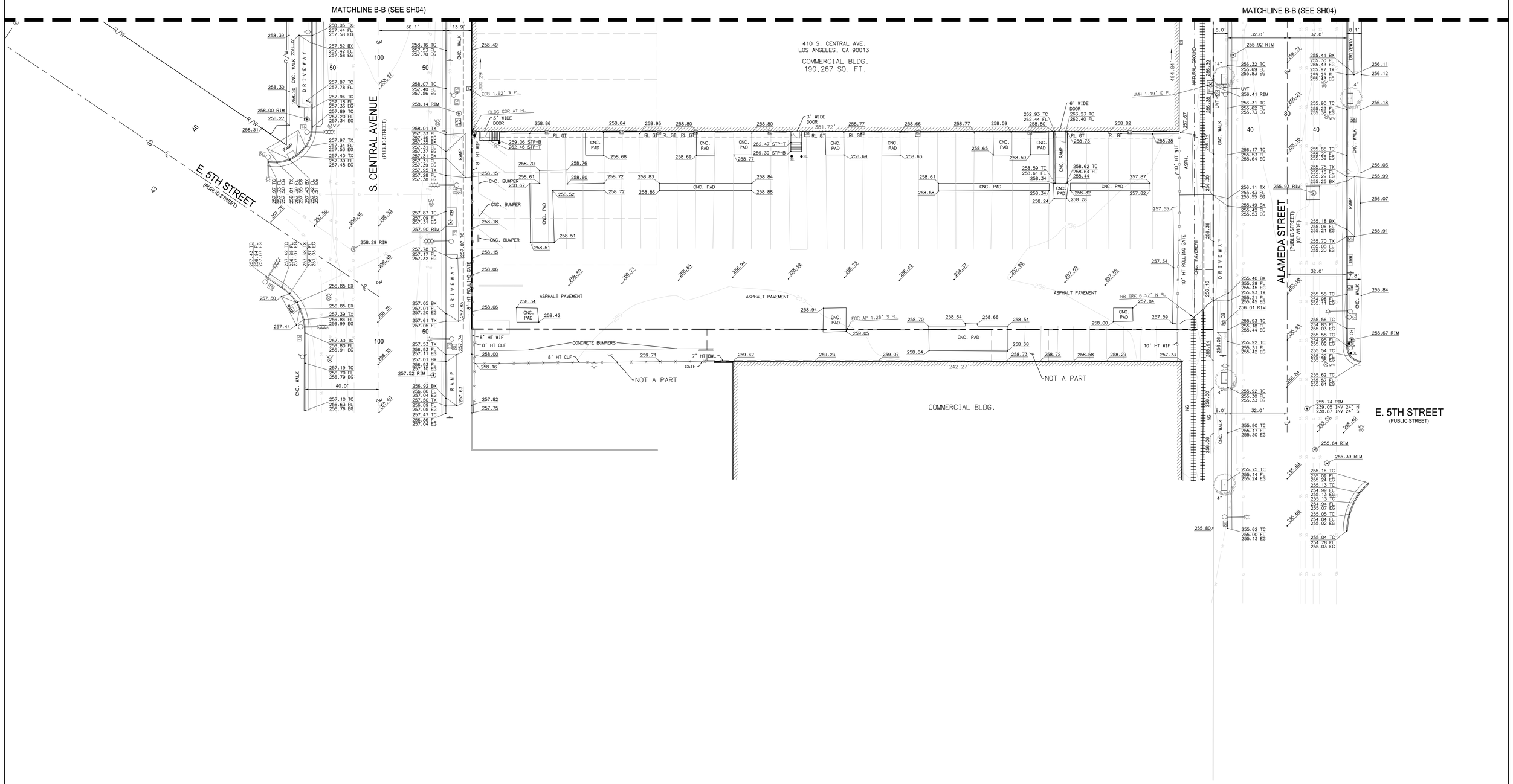
ALTA/NSPS LAND TITLE SURVEY



N

0 10' 20'

SCALE: 1"=20'

NO.	DATE	REVISIONS
6		
5		
4		
3		
2		
1		

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

PREPARED FOR:

MR. ROGER PECSOK
CONTINUUM PARTNERS
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ALTA/NSPS LAND TITLE SURVEY
(DETAIL - (VACATED) EAST 4TH STREET AND (CURRENT) EAST 4TH STREET

S. CENTRAL AVENUE
(PUBLIC STREET)

CENTRAL AVENUE
(FORMERLY KNOWN AS WOLFSKILL AVE)

E. 4TH STREET
(PUBLIC STREET)

ALAMEDA STREET
(PUBLIC STREET)
(80' WIDE)

WOLFSKILL ORCHARD TRACT
M.B. 30/8

PARCEL 1
PARCEL 2
PARCEL 3
PARCEL 4

N87°05'30"W 201.05' (R)
N02°54'30"E 244.0' (R)
N02°48'56"E 174.53' (M)
PARCEL 2 101.40' (R)
PARCEL 1
N87°05'30"W 215.00' (R)
N02°48'19"E 32.83'
S87°11'54"E 0.07' (M)
N71°44'14"W 222.99' (M)
N24°32'16"W (R)
N55°32'03"E 12.11' (M)
N55°36'46"E (R)
S02°48'19"W 697.54' (M)
S02°55'00"W 665.97' (R)
N71°44'14"W 395.21' (M) N71°37'14"W 395.17' (R)
S34°27'39"E 15.91' (M)
S34°21'02"E 15.87' (R)
N02°55'31"E 587.11' (R)
N02°48'56"E 587.05' (M)

OLD RIGHT-OF-WAY LINE
RIGHT-OF-WAY / PROPERTY LINE
OLD CENTERLINE
CENTERLINE
EXISTING CENTERLINE
RIGHT-OF-WAY LINE (E. 4TH STREET)
80.0' OLD RIGHT-OF-WAY
90.0' (VACATED) 4TH STREET

LINETYPES
- PROPERTY LINE
- LOT LINE
- RIGHT OF WAY LINE
- CENTERLINE
- EASEMENT LINE
- OLD CENTERLINE
- OLD RIGHT-OF-WAY

N
0 25' 50'
SCALE: 1"=50'

NO.	DATE	REVISIONS
6		
5		
4		
3		
2		
1		

PROJECT #	2000500
DATE PREPARED	04/21/2021
DRAWN BY	BN
CHECKED BY	CJ

400 S. CENTRAL AVENUE

PREPARED FOR:
MR. ROGER PECSOK
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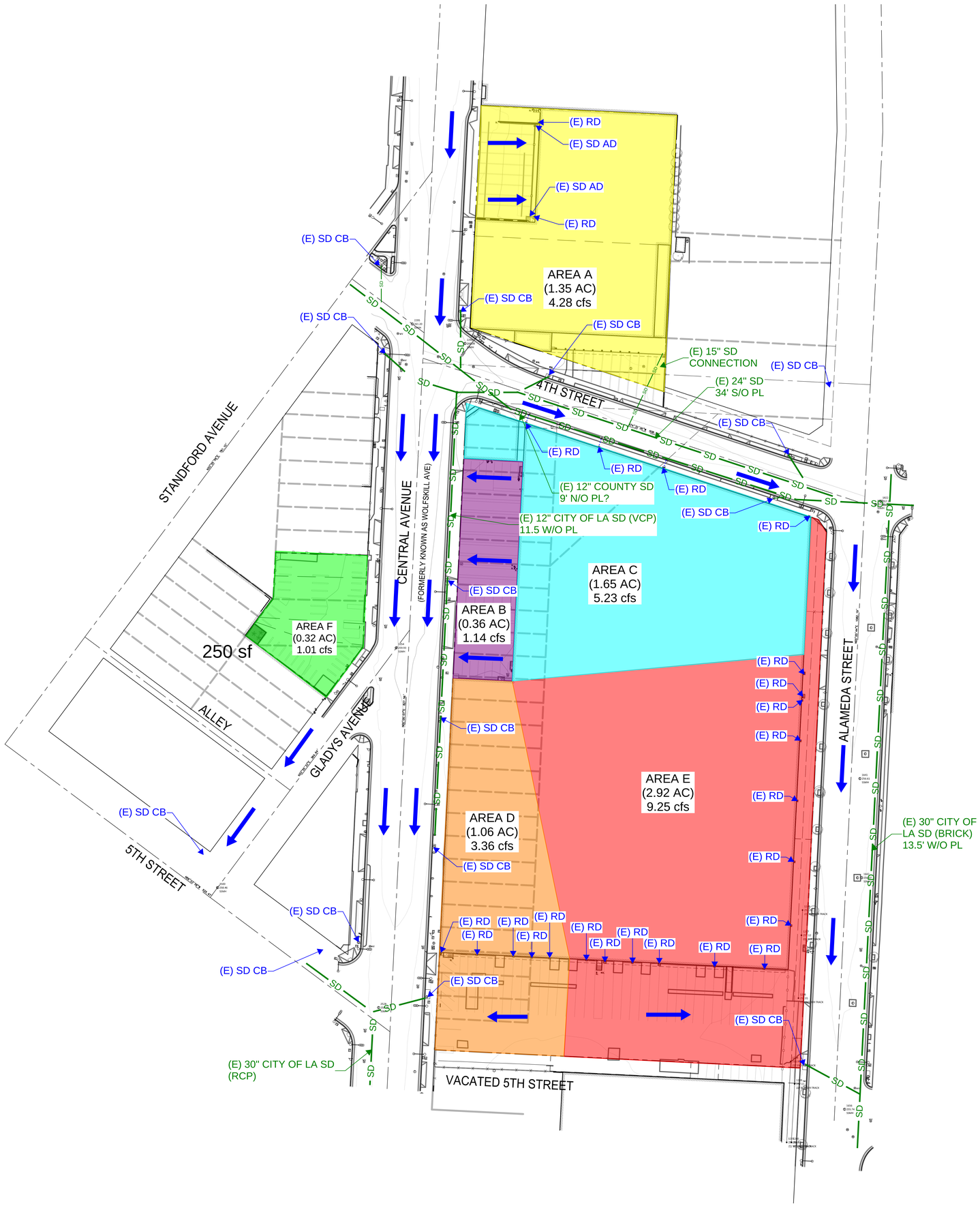
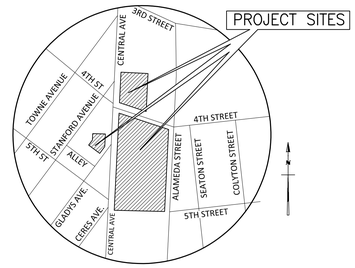
FIGURE 2 - EXISTING DRAINAGE EXHIBIT





VICINITY MAP
(NOT TO SCALE)

BENCHMARK . . BM: 12–05072

WIRE SPK IN E CURB CENTRAL AVE; 11.6FT N OF C CURB RETURN N OF 4TH ST; N END CB

EL: 260.354 NAVD 1988 ; RECORDED: 2000

LAND AREA . .

GROSS AREA

707 E. 4TH ST.: 58,644 SQ. FT., OR 1.346 ACRES, MORE OR LESS

410 S. CENTRAL AVE.: 260,594 SQ. FT., OR 5.982 ACRES, MORE OR LESS

431, 427, 433 S. CENTRAL AVE.: 14,043 SQ. FT., OR 0.322 ACRES, MORE OR LESS

TOTAL: 333,281 SQ. FT., OR 7.651 ACRES, MORE OR LESS

NET AREA

707 E. 4TH ST.: 58,644 SQ. FT., OR 1.346 ACRES, MORE OR LESS

410 S. CENTRAL AVE.: 254,980 SQ. FT., OR 5.854 ACRES, MORE OR LESS

431, 427, 433 S. CENTRAL AVE.: 14,043 SQ. FT., OR 0.322 ACRES, MORE OR LESS

TOTAL: 327,667 SQ. FT., OR 7.522 ACRES, MORE OR LESS

LEGEND

SURFACE DRAINAGE	
AREA A (1.35 AC)	100% IMP
AREA B (0.36 AC)	100% IMP
AREA C (1.65 AC)	100% IMP
AREA D (1.12 AC)	100% IMP
AREA E (2.76 AC)	100% IMP
AREA F (0.33 AC)	98.25% IMP
(E) SD CB	CATCH BASIN
(E) SD AD	AREA DRAIN
(E) RD	ROOF DRAIN

PROJECT SUMMARY:

TOTAL PROJECT GROSS AREA = 333,602 SF = 7.66 AC
*FROM SURVEY

LA Hydrology Data:
85th Percentile Isohyet: 1.0 in
50 Yr = 5.90 in
Soil Type: 006

N
0 20' 40'
SCALE: 1"=40'

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CONSULTANTS

STAMP

REVISIONS

DATE		ISSUED FOR
xx	1	xx

DATE	10/28/2020
PROJECT NUMBER	2000776
DESIGNED BY	AT
DRAWN BY	AT
CHECKED BY	RS
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION
CONTINUUM 400 CENTRAL

400 S CENTRAL AVE,
LOS ANGELES, CA 90013

DRAWING TITLE
EXISTING DRAINAGE EXHIBIT

SHEET NUMBER (EXHIBIT NUMBER)
EX-1

C:\Users\rahuong\Desktop\400 S Central Survey DELETE.dwg, Oct 28, 2020 - 3:30pm

FIGURE 3 - PROPOSED DRAINAGE EXHIBIT

kpff 08/05/2021

PROJECT SUMMARY:

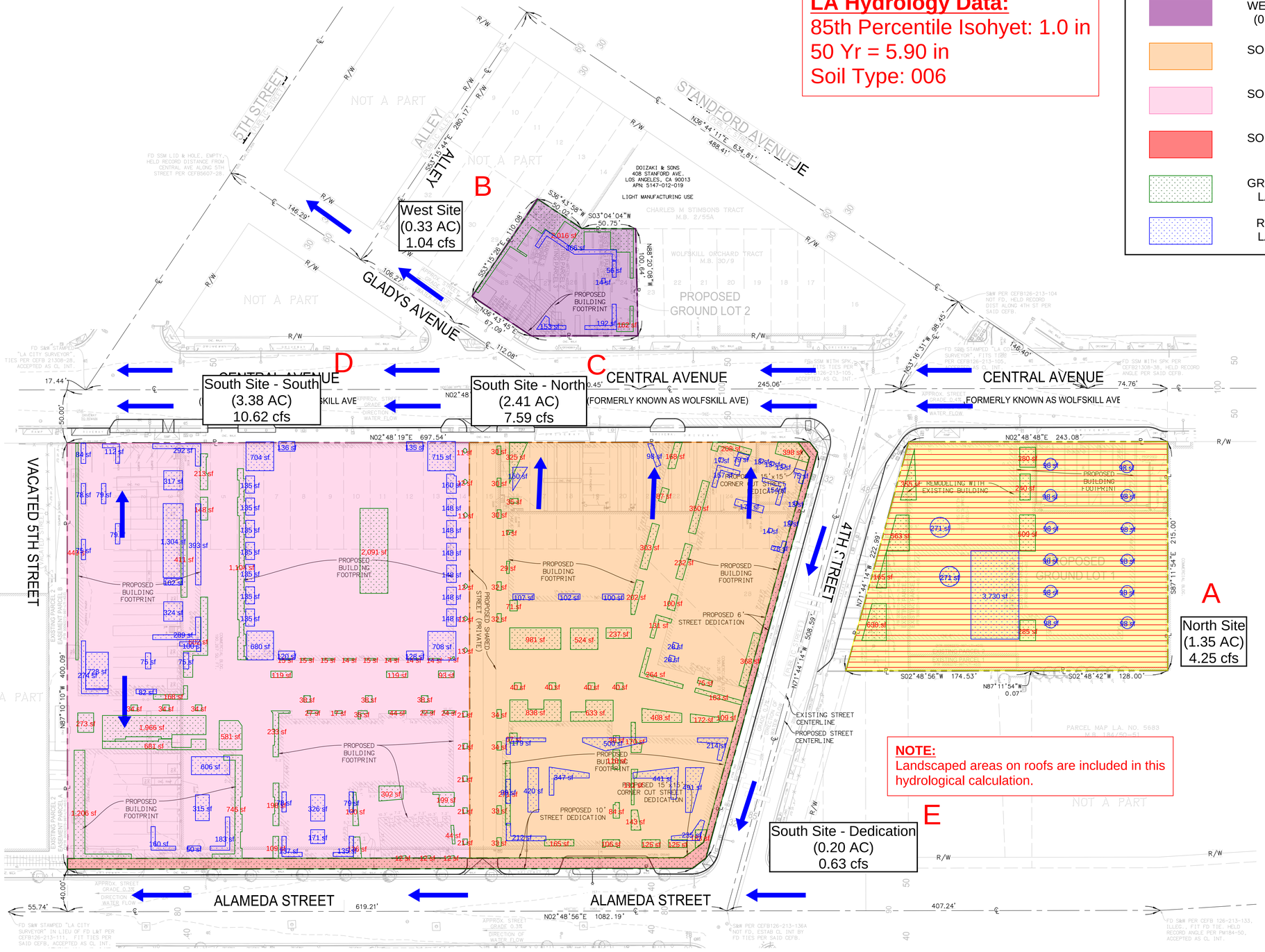
TOTAL PROJECT AREA = 333,602 SF = 7.66 AC
*FROM SURVEY

LA Hydrology Data:

85th Percentile Isohyet: 1.0 in
50 Yr = 5.90 in
Soil Type: 006

LEGEND

SURFACE DRAINAGE		
NORTH SITE (1.35 AC)	86% IMP	
WEST SITE (0.33 AC)	79% IMP	
SOUTH SITE - NORTH (2.41 AC)	88% IMP	
SOUTH SITE - SOUTH (3.38 AC)	83% IMP	
SOUTH SITE - DEDICATIONS (0.20 AC)	100% IMP	
GROUND LEVEL LANDSCAPE		
ROOF LEVEL LANDSCAPE		



NOTE:
Landscaped areas on roofs are included in this hydrological calculation.

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

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STAMP

REVISIONS

DATE		ISSUED FOR

DATE	04.07.21
PROJECT NUMBER	2000776
DESIGNED BY	RS
DRAWN BY	DJ
CHECKED BY	RS
SCALE	AS SPECIFIED

KEY MAP

PROJECT DESCRIPTION
FOURTH AND CENTRAL
LOS ANGELES, CA

DRAWING TITLE
STREET SECTIONS
PLAN VIEW

SHEET NUMBER (EXHIBIT NUMBER)
C1

FIGURE 4 A

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure3A-400 S Central - Area A.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area A
Area (ac)	1.35
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	4.2769
Burned Peak Flow Rate (cfs)	4.2769
24-Hr Clear Runoff Volume (ac-ft)	0.5924
24-Hr Clear Runoff Volume (cu-ft)	25806.6081

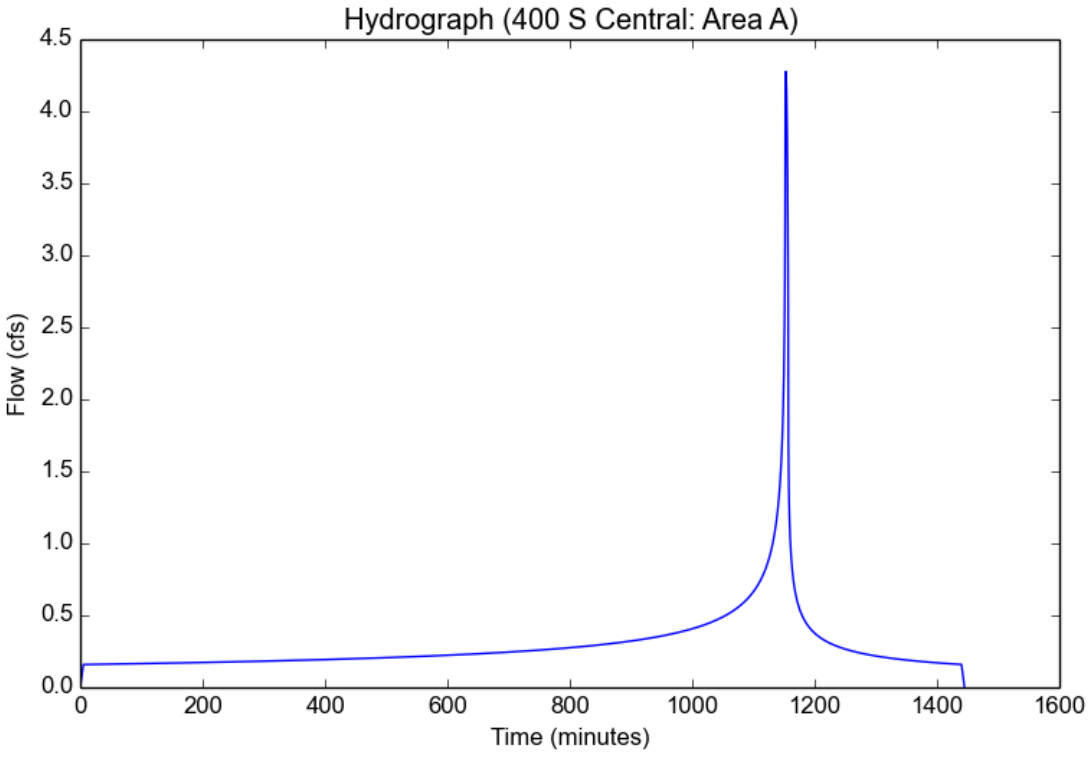


FIGURE 4 B

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure4B-400 S Central - Area B.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area B
Area (ac)	0.36
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.1405
Burned Peak Flow Rate (cfs)	1.1405
24-Hr Clear Runoff Volume (ac-ft)	0.158
24-Hr Clear Runoff Volume (cu-ft)	6881.7622

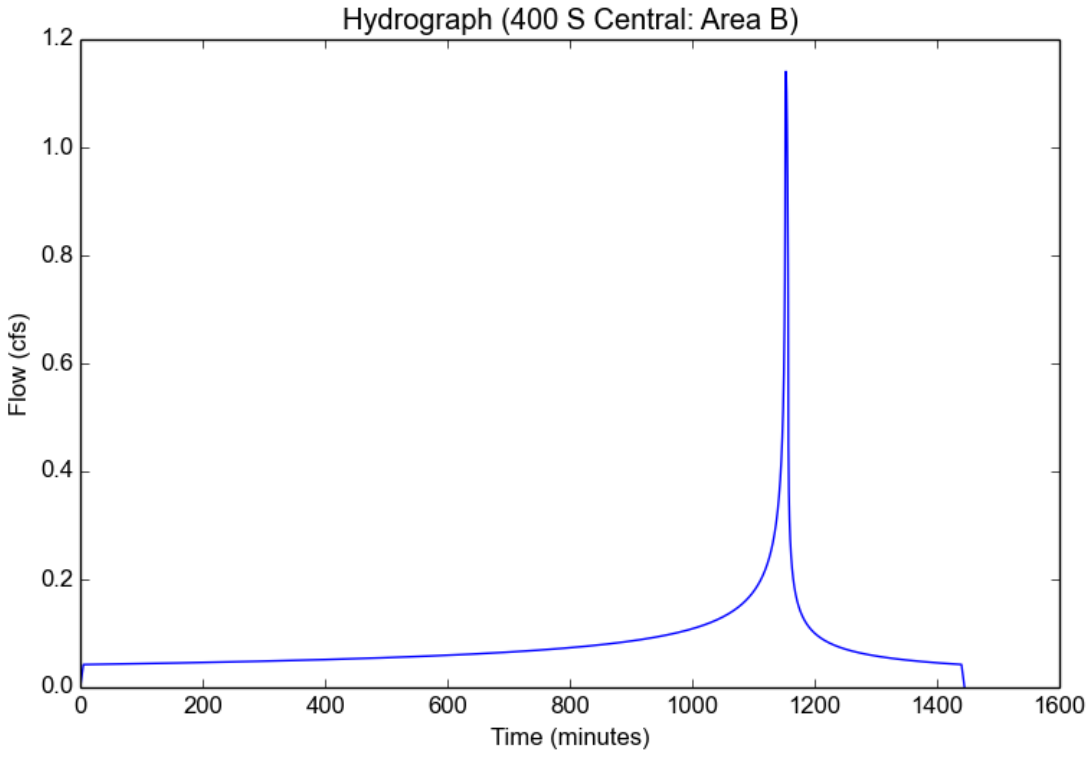


FIGURE 4 C

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure4C-400 S Central - Area C.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area C
Area (ac)	1.65
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	5.2274
Burned Peak Flow Rate (cfs)	5.2274
24-Hr Clear Runoff Volume (ac-ft)	0.7241
24-Hr Clear Runoff Volume (cu-ft)	31541.4099

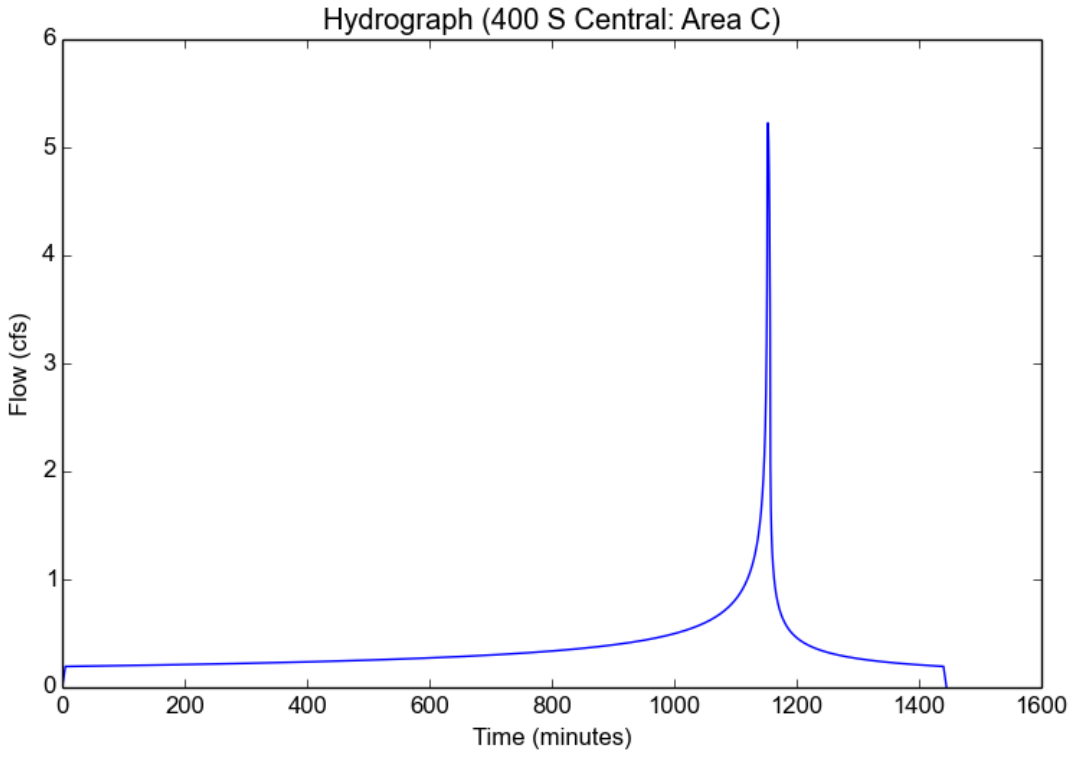


FIGURE 4 D

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure4D-400 S Central - Area D.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area D
Area (ac)	1.12
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	3.5483
Burned Peak Flow Rate (cfs)	3.5483
24-Hr Clear Runoff Volume (ac-ft)	0.4915
24-Hr Clear Runoff Volume (cu-ft)	21409.9267

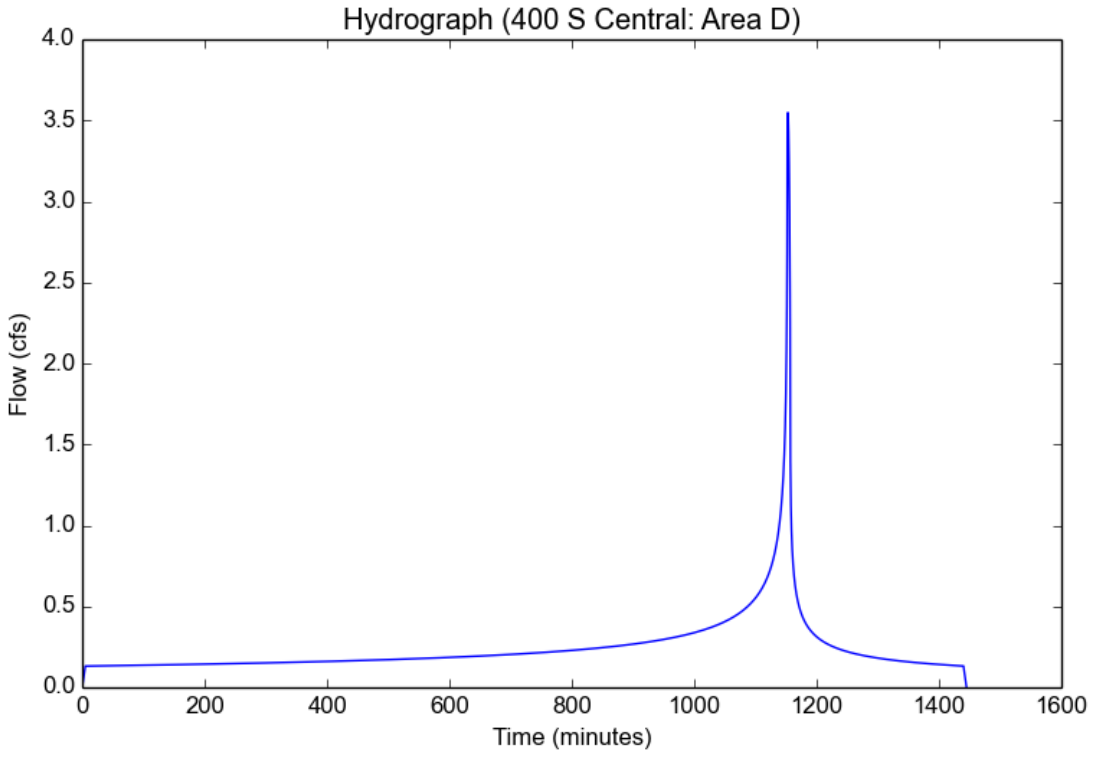


FIGURE 4 E

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure4E-400 S Central - Area E.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area E
Area (ac)	2.76
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.7439
Burned Peak Flow Rate (cfs)	8.7439
24-Hr Clear Runoff Volume (ac-ft)	1.2112
24-Hr Clear Runoff Volume (cu-ft)	52760.1765

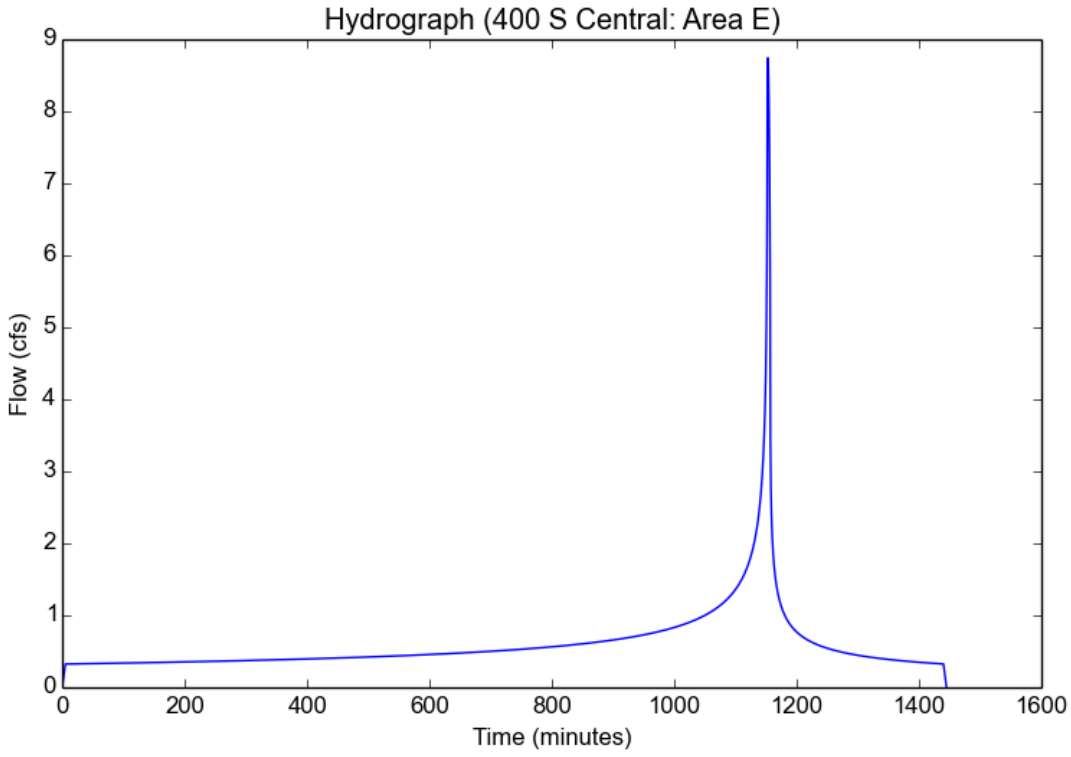


FIGURE 4 F

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-05-12 HydroCalc 50YR Ex Drainage/Figure4F-400 S Central - Area F.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	Area F
Area (ac)	0.33
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
50-yr Rainfall Depth (in)	5.9
Percent Impervious	0.98
Soil Type	6
Design Storm Frequency	50-yr
Fire Factor	0
LID	False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.8992
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0445
Burned Peak Flow Rate (cfs)	1.0445
24-Hr Clear Runoff Volume (ac-ft)	0.1426
24-Hr Clear Runoff Volume (cu-ft)	6212.1717

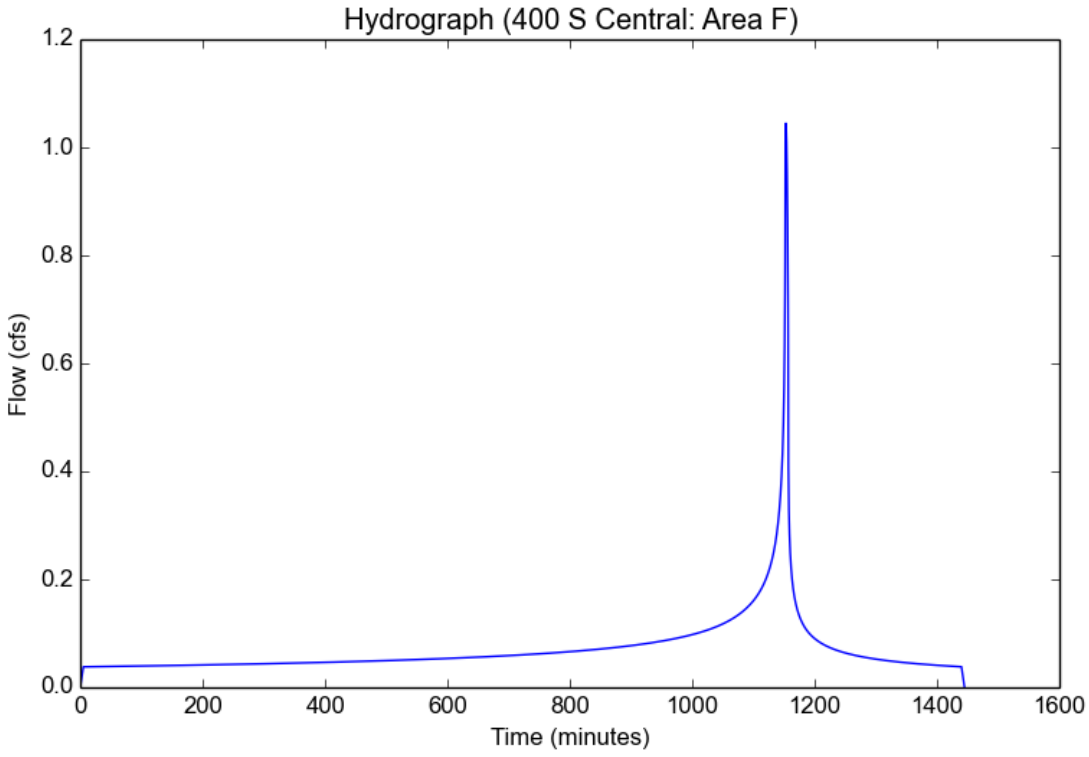


FIGURE 5 A

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/Entitlements/Water Resources Report/Appendix/2021-08-05 HydroCalcs (Proposed Drai
Version: HydroCalc 1.0.2

Input Parameters

Project Name		Continuum - 400 S Central
Subarea ID	A	Propose Drainage - North Site
Area (ac)		1.35
Flow Path Length (ft)		100.0
Flow Path Slope (vft/hft)		0.02
50-yr Rainfall Depth (in)		5.9
Percent Impervious		0.86
Soil Type		6
Design Storm Frequency		50-yr
Fire Factor		0
LID		False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.8941
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	4.2491
Burned Peak Flow Rate (cfs)	4.2491
24-Hr Clear Runoff Volume (ac-ft)	0.5293
24-Hr Clear Runoff Volume (cu-ft)	23054.359

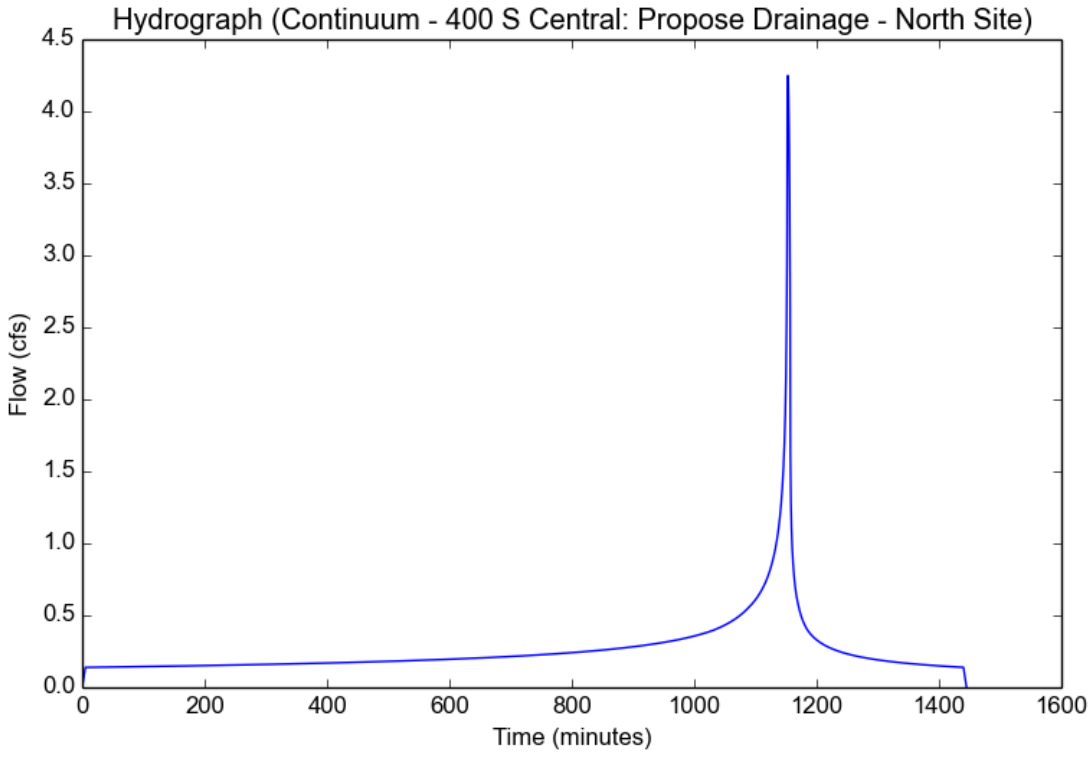


FIGURE 5 B

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/Entitlements/Water Resources Report/Appendix/2021-08-05 HydroCalcs (Proposed Drai
Version: HydroCalc 1.0.2

Input Parameters

Project Name		Continuum - 400 S Central
Subarea ID	B	Proposed Drainage - West Site
Area (ac)		0.33
Flow Path Length (ft)		100.0
Flow Path Slope (vft/hft)		0.02
50-yr Rainfall Depth (in)		5.9
Percent Impervious		0.79
Soil Type		6
Design Storm Frequency		50-yr
Fire Factor		0
LID		False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.8912
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	1.0353
Burned Peak Flow Rate (cfs)	1.0353
24-Hr Clear Runoff Volume (ac-ft)	0.1217
24-Hr Clear Runoff Volume (cu-ft)	5299.124

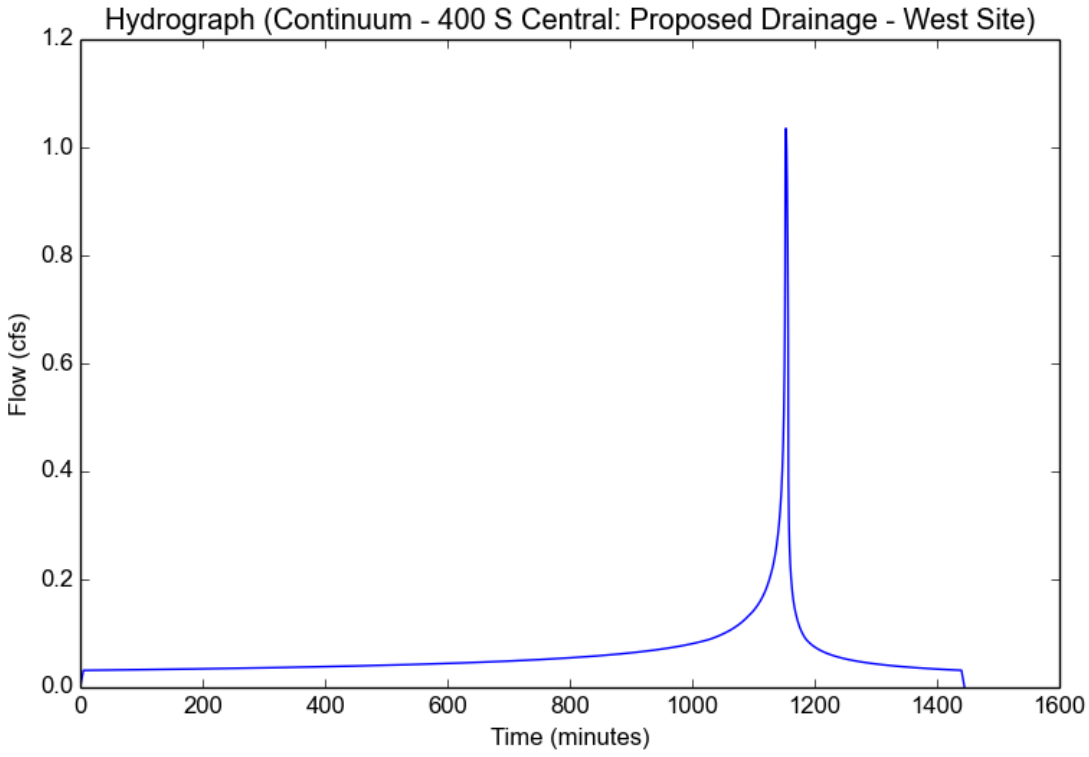


FIGURE 5 C

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/Entitlements/Water Resources Report/Appendix/2021-08-05 HydroCalcs (Proposed Drai
Version: HydroCalc 1.0.2

Input Parameters

Project Name		Continuum - 400 S Central
Subarea ID	C	Proposed Drainage - South Site - N
Area (ac)		3.11
Flow Path Length (ft)		100.0
Flow Path Slope (vft/hft)		0.02
50-yr Rainfall Depth (in)		5.9
Percent Impervious		0.91
Soil Type		6
Design Storm Frequency		50-yr
Fire Factor		0
LID		False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.8962
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	9.8115
Burned Peak Flow Rate (cfs)	9.8115
24-Hr Clear Runoff Volume (ac-ft)	1.2712
24-Hr Clear Runoff Volume (cu-ft)	55374.8288

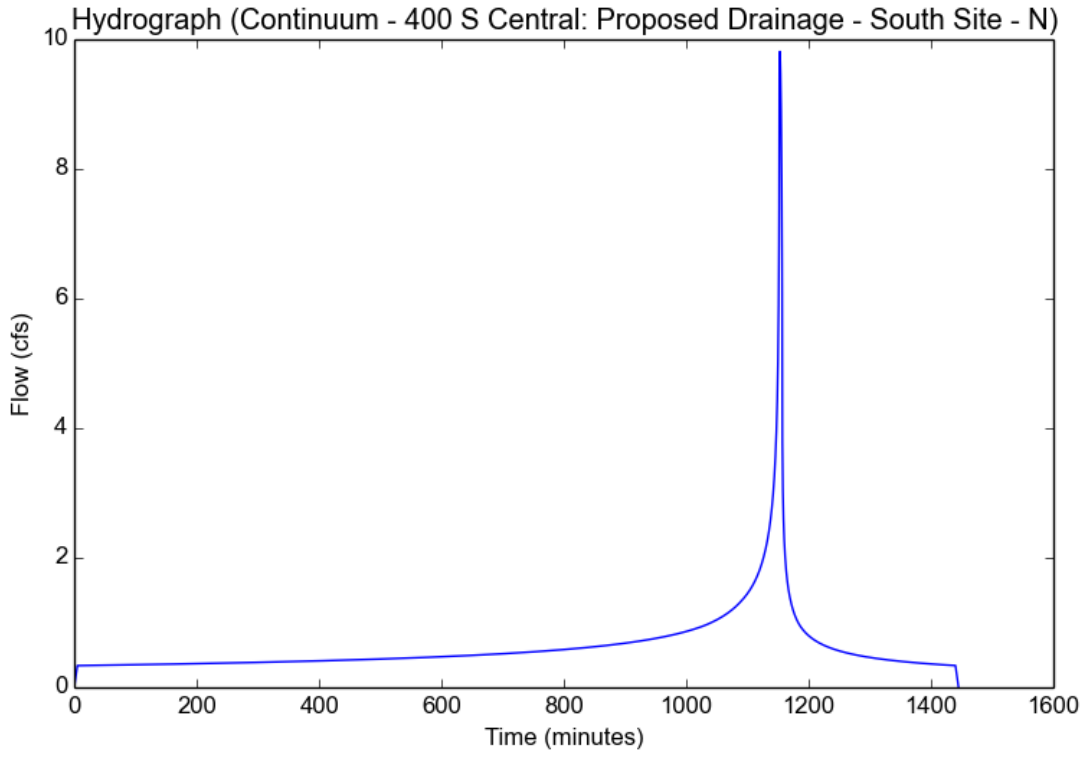


FIGURE 5 D

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/Entitlements/Water Resources Report/Appendix/2021-08-05 HydroCalcs (Proposed Drai
Version: HydroCalc 1.0.2

Input Parameters

Project Name		Continuum - 400 S Central
Subarea ID	D	Proposed Drainage - South Site -S
Area (ac)		4.47
Flow Path Length (ft)		100.0
Flow Path Slope (vft/hft)		0.02
50-yr Rainfall Depth (in)		5.9
Percent Impervious		0.88
Soil Type		6
Design Storm Frequency		50-yr
Fire Factor		0
LID		False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.895
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	14.0824
Burned Peak Flow Rate (cfs)	14.0824
24-Hr Clear Runoff Volume (ac-ft)	1.7823
24-Hr Clear Runoff Volume (cu-ft)	77637.4017

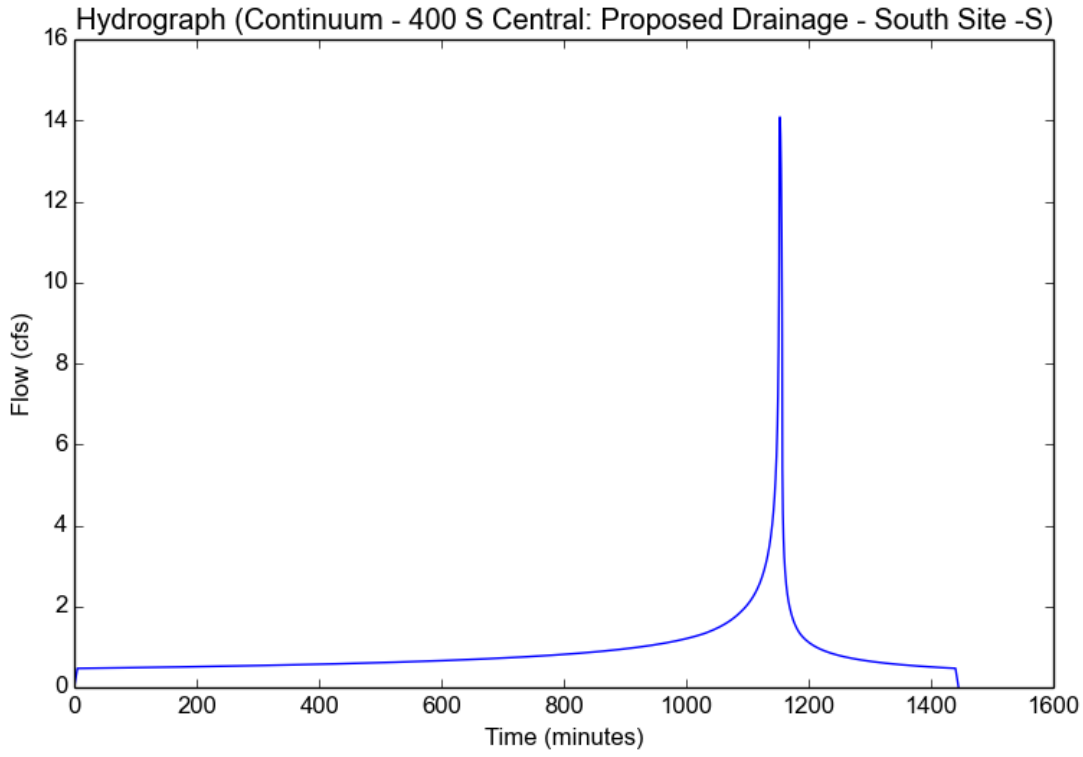


FIGURE 5 E

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/Entitlements/Water Resources Report/Appendix/2021-08-05 HydroCalcs (Proposed Drai
Version: HydroCalc 1.0.2

Input Parameters

Project Name		Continuum - 400 S Central
Subarea ID	E	Proposed Drainage - South Site - Dedication
Area (ac)		0.2
Flow Path Length (ft)		100.0
Flow Path Slope (vft/hft)		0.02
50-yr Rainfall Depth (in)		5.9
Percent Impervious		1.0
Soil Type		6
Design Storm Frequency		50-yr
Fire Factor		0
LID		False

Output Results

Modeled (50-yr) Rainfall Depth (in)	5.9
Peak Intensity (in/hr)	3.5201
Undeveloped Runoff Coefficient (Cu)	0.8582
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.6336
Burned Peak Flow Rate (cfs)	0.6336
24-Hr Clear Runoff Volume (ac-ft)	0.0878
24-Hr Clear Runoff Volume (cu-ft)	3823.2012

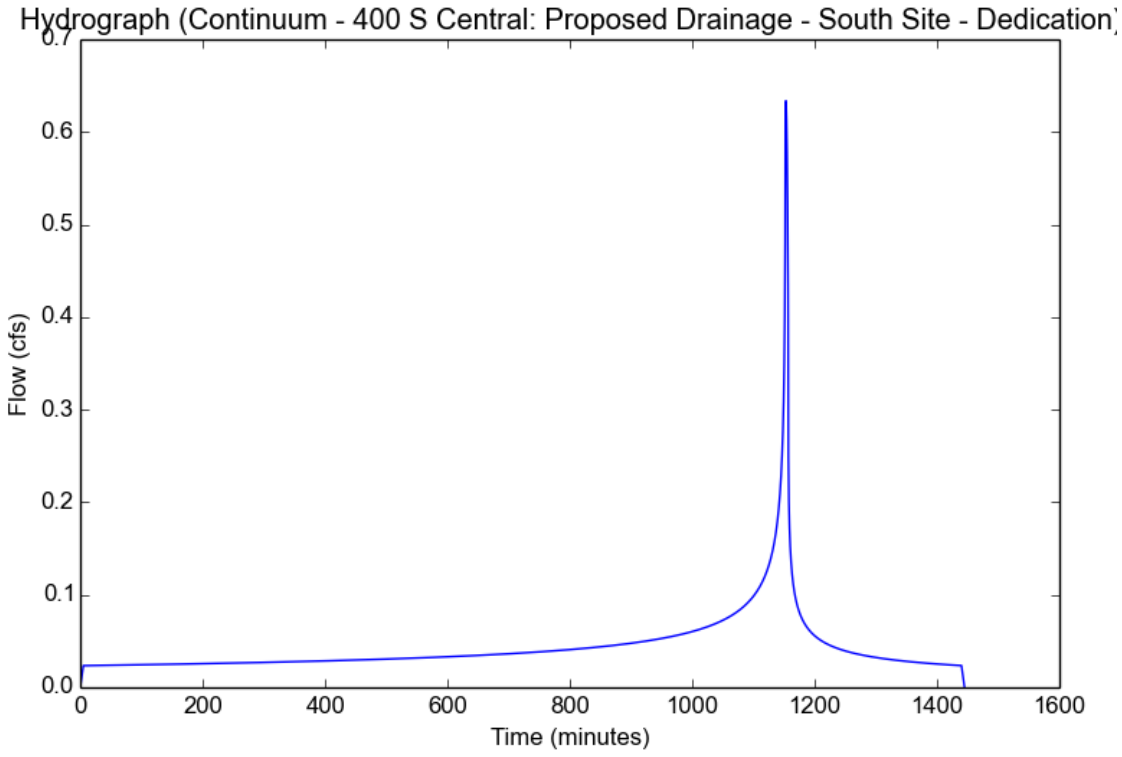


FIGURE 6 A

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-02-09 HydroCalc 100 Imp/400 S Central - North Site.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	North Site
Area (ac)	1.35
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.0
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.0
Peak Intensity (in/hr)	0.5094
Undeveloped Runoff Coefficient (Cu)	0.33
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	0.6189
Burned Peak Flow Rate (cfs)	0.6189
24-Hr Clear Runoff Volume (ac-ft)	0.1004
24-Hr Clear Runoff Volume (cu-ft)	4374.0027

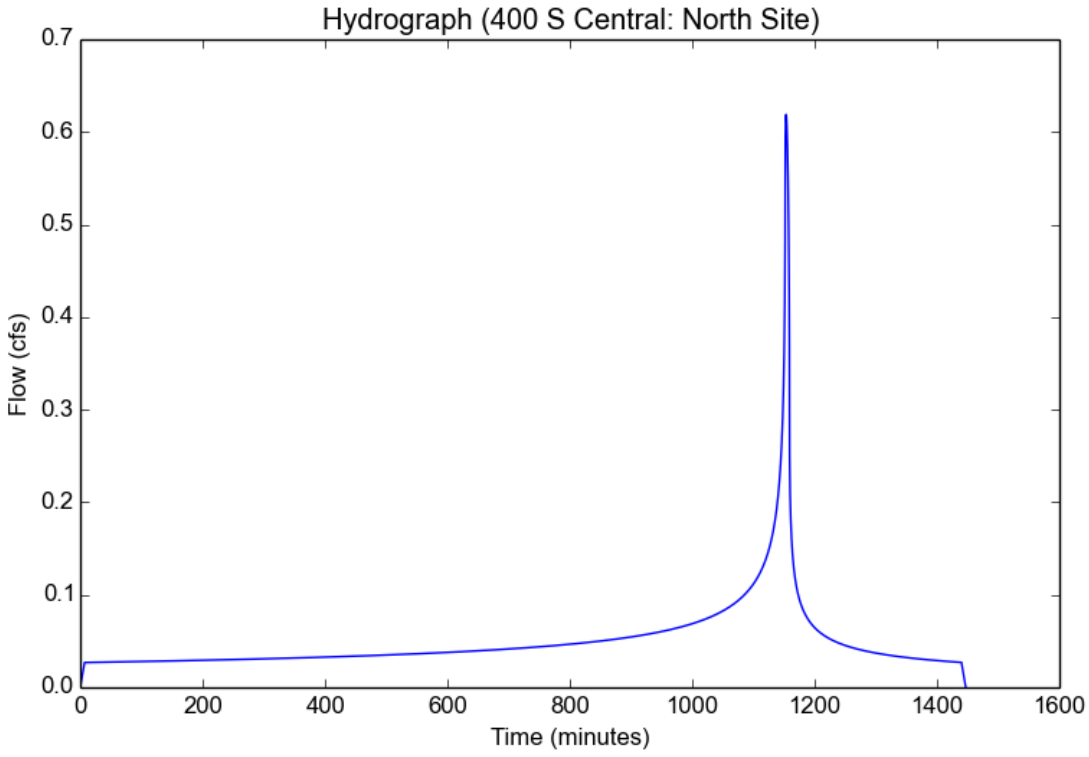


FIGURE 6 B

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-02-26 HydroCalc 90 Imp South Sites/400 S Central - South Site-1.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	South Site
Area (ac)	5.75
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.0
Percent Impervious	0.9
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.0
Peak Intensity (in/hr)	0.4784
Undeveloped Runoff Coefficient (Cu)	0.2862
Developed Runoff Coefficient (Cd)	0.8386
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	2.3067
Burned Peak Flow Rate (cfs)	2.3067
24-Hr Clear Runoff Volume (ac-ft)	0.39
24-Hr Clear Runoff Volume (cu-ft)	16988.59

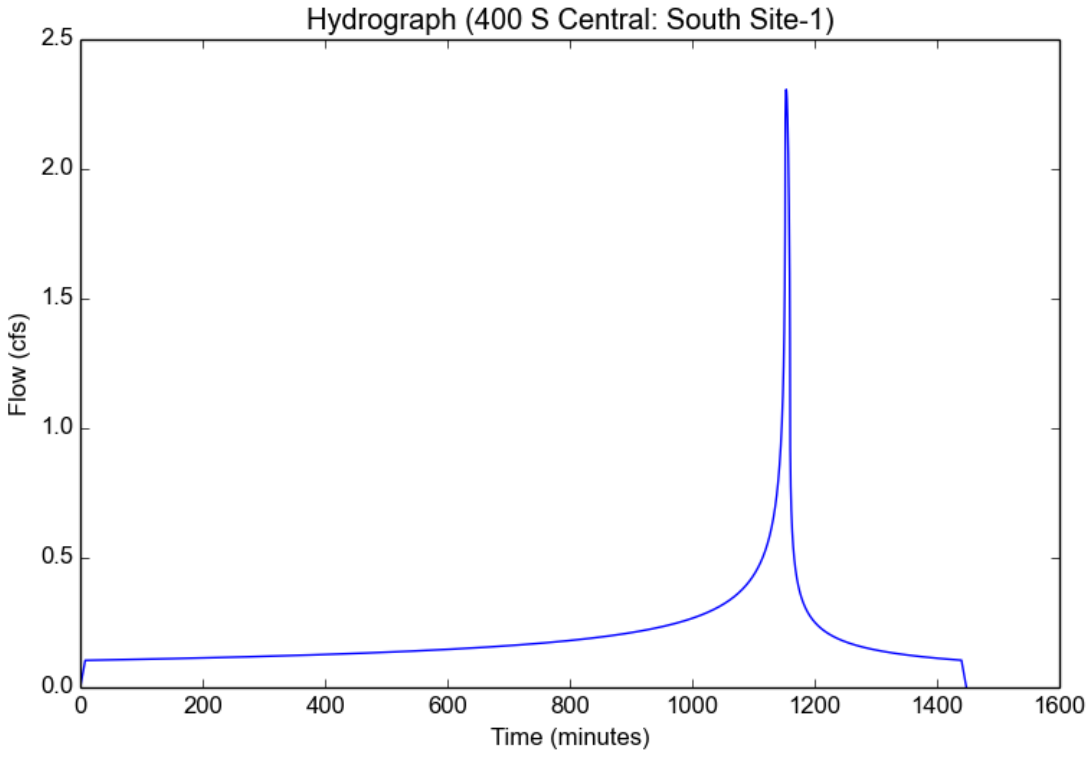


FIGURE 6 C

Peak Flow Hydrologic Analysis

File location: P:/2020/2000776 Continuum 400 Central/2 ENGR/STORM/2021-02-09 HydroCalc 100 Imp/400 S Central - West Site.pdf
Version: HydroCalc 1.0.2

Input Parameters

Project Name	400 S Central
Subarea ID	West Site
Area (ac)	0.32
Flow Path Length (ft)	100.0
Flow Path Slope (vft/hft)	0.02
85th Percentile Rainfall Depth (in)	1.0
Percent Impervious	1.0
Soil Type	6
Design Storm Frequency	85th percentile storm
Fire Factor	0
LID	True

Output Results

Modeled (85th percentile storm) Rainfall Depth (in)	1.0
Peak Intensity (in/hr)	0.5094
Undeveloped Runoff Coefficient (Cu)	0.33
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	7.0
Clear Peak Flow Rate (cfs)	0.1467
Burned Peak Flow Rate (cfs)	0.1467
24-Hr Clear Runoff Volume (ac-ft)	0.0238
24-Hr Clear Runoff Volume (cu-ft)	1036.8006

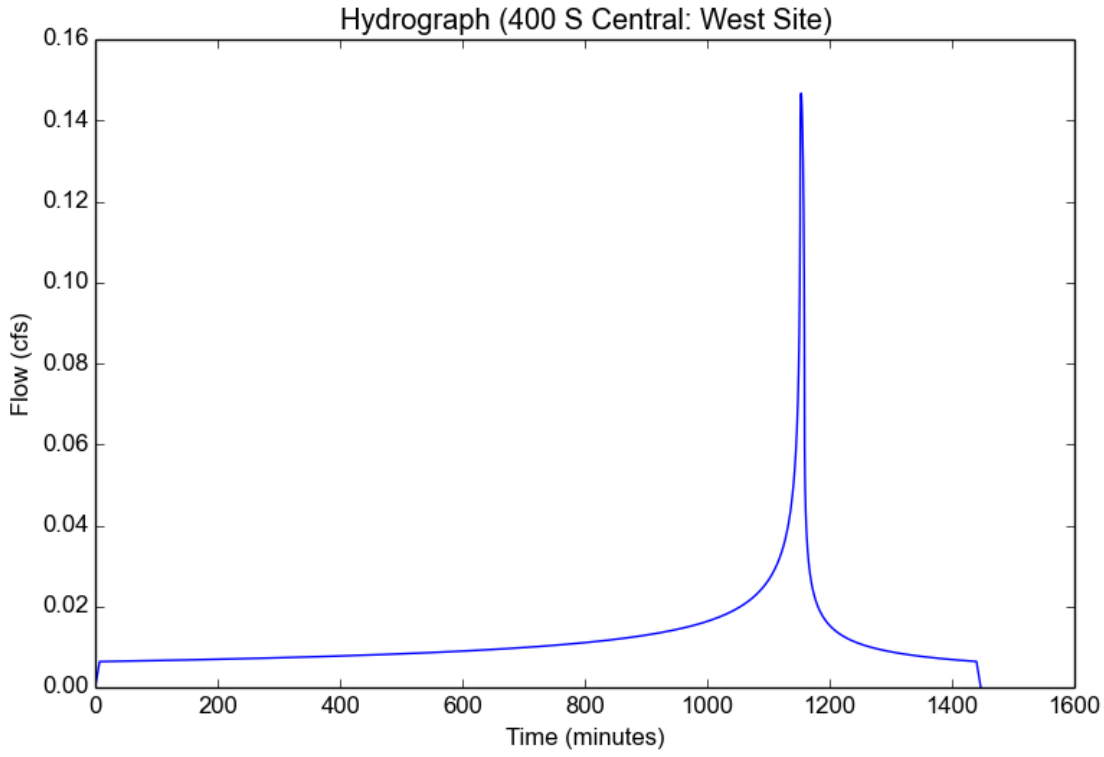
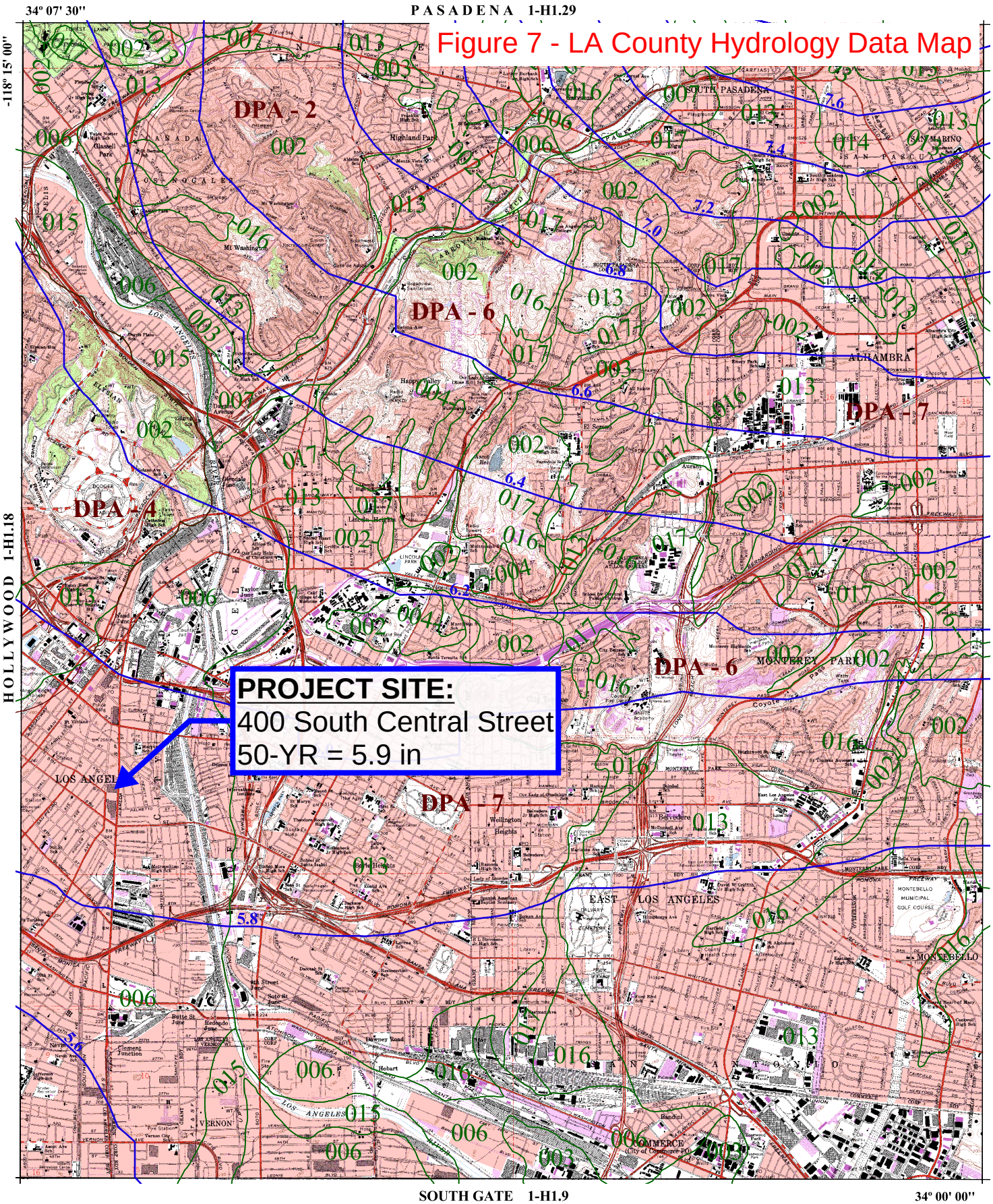


Figure 7 - LA County Hydrology Data Map



016 SOIL CLASSIFICATION AREA

7.2 INCHES OF RAINFALL

DPA - 6 DEBRIS POTENTIAL AREA

N W E S

1 0 1 2 Miles

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

LOS ANGELES 50-YEAR 24-HOUR ISOHYET

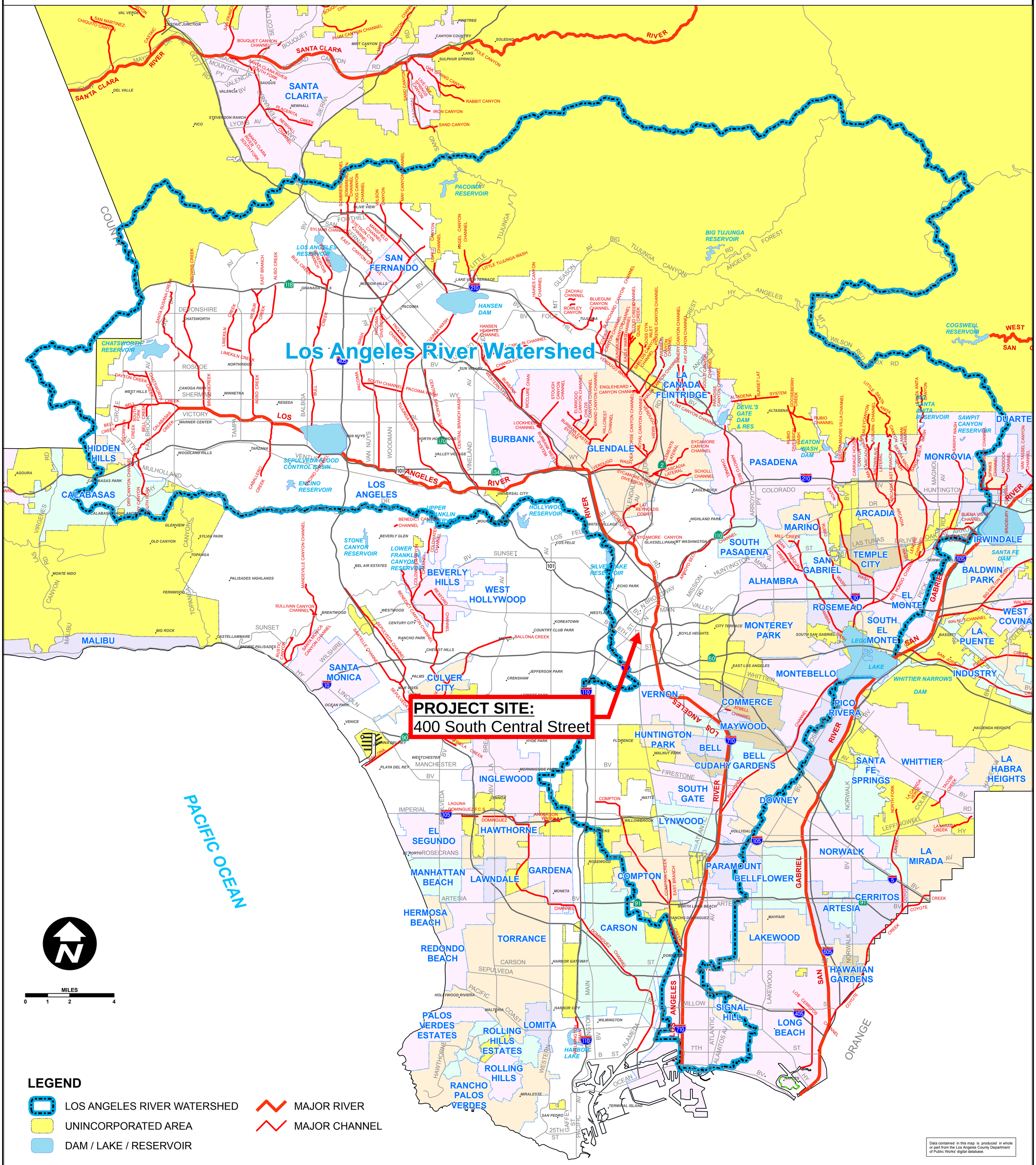
1-H1.19

LOS ANGELES COUNTY PUBLIC WORKS Public Service That Works

COUNTY OF LOS ANGELES

LOS ANGELES RIVER WATERSHED

Figure 8 - Los Angeles River Watershed Map



REF: \\pwgis02\mpmgis\MPMGIS\projects\mpm\gismaps\wk_2627\lariver_wtrsheds.mxd DATE: 08/22/07

Mapping & Property Management Division, Mapping & GIS Services Section

National Flood Hazard Layer FIRMette

FEMA

118°14'41"W 34°2'52"N

118°14'3"W 34°2'22"N

Feet 1:6,000

0 250 500 1,000 1,500 2,000

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

Legend

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

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

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

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

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

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

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

N

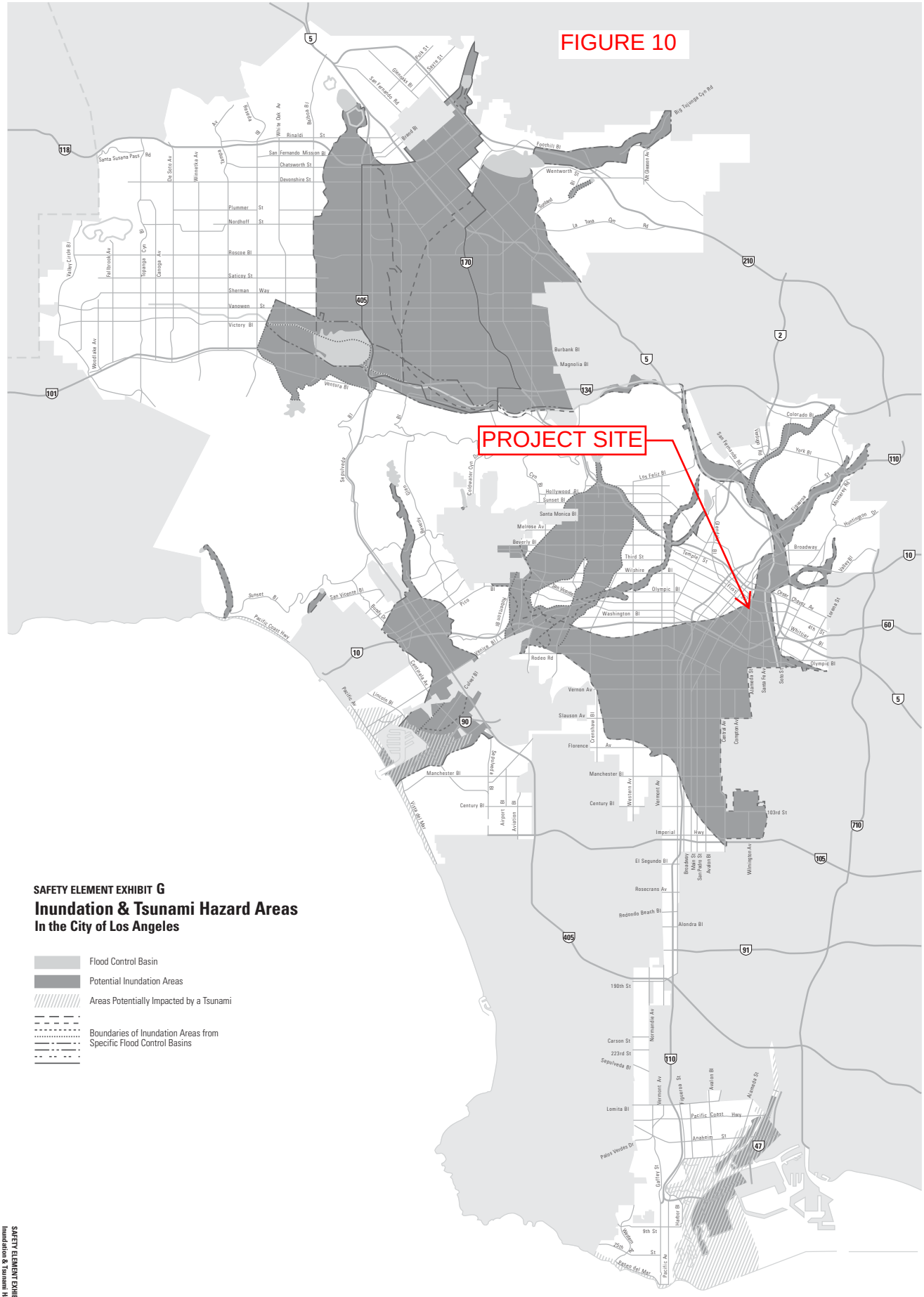
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/12/2021 at 4:28 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FIGURE 10



SAFETY ELEMENT EXHIBIT G

Inundation & Tsunami Hazard Areas
In the City of Los Angeles

- Flood Control Basin
- Potential Inundation Areas
- Areas Potentially Impacted by a Tsunami
- Boundaries of Inundation Areas from Specific Flood Control Basins

N

1 1/2 0 1 2 3 4 5 KILOMETERS

1 1/2 1/4 0 1 2 3 4 MILES

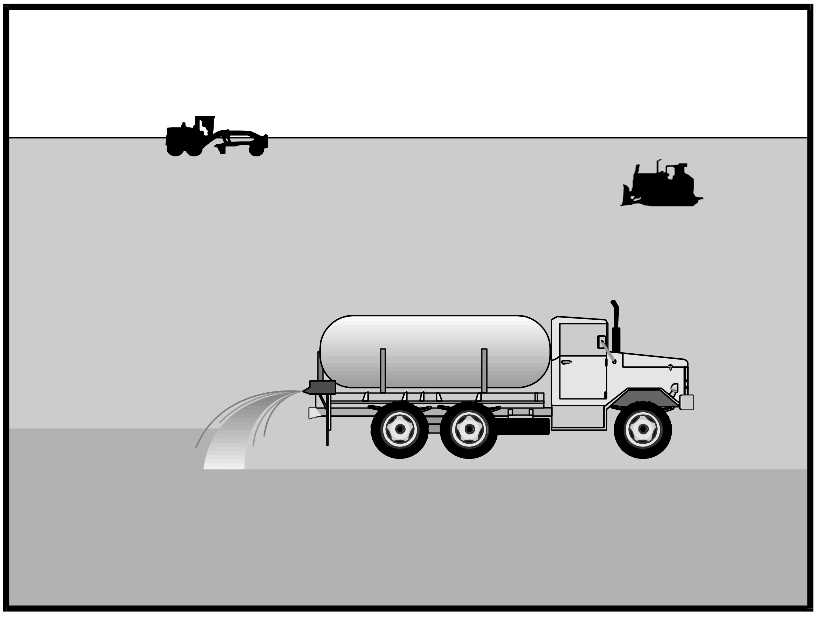
Sources: Environmental Impact Report, Framework Element, Los Angeles City General Plan, May 1995; Technical Appendix to the Safety Element of the Los Angeles County General Plan Hazard Reducation in Los Angeles County, Volume 2, Plate 6, "Flood and Inundation Hazards" January 1990; California Environmental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

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

SAFETY ELEMENT EXHIBIT G
Inundation & Tsunami Hazard Areas

Soil Binders

EC-5



Categories

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

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

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

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

Description and Purpose

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

Suitable Applications

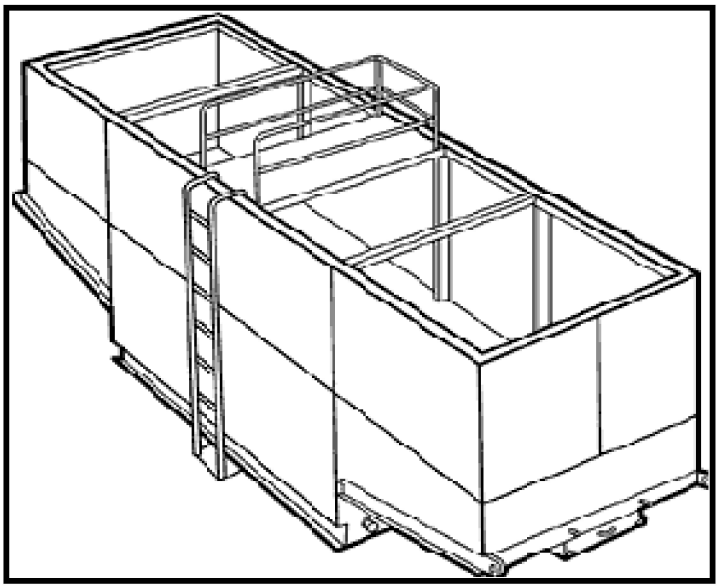
Soil binders are typically applied to disturbed areas requiring temporary protection. Because soil binders, when used as a stand-alone practice, can often be incorporated into the soil, they are a good alternative to mulches in areas where grading activities will soon resume. Soil binders are commonly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

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

Limitations

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

Dewatering Operations NS-2



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

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

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

Potential Alternatives

SE-5: Fiber Roll

SE-6: Gravel Bag Berm

Description and Purpose

Dewatering operations are practices that manage the discharge of pollutants when non-stormwater and accumulated precipitation (stormwater) must be removed from a work location to proceed with construction work or to provide vector control.

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

Discharges from dewatering operations can contain high levels of fine sediment that, if not properly treated, could lead to exceedences of the General Permit requirements.

Suitable Applications

These practices are implemented for discharges of non-stormwater from construction sites. Non-stormwaters include, but are not limited to, groundwater, water from cofferdams, water diversions, and waters used during construction activities that must be removed from a work area to facilitate construction.

Practices identified in this section are also appropriate for implementation when managing the removal of accumulated precipitation (stormwater) from depressed areas at a construction site.

Stormwater mixed with non-stormwater should be managed as non-stormwater.

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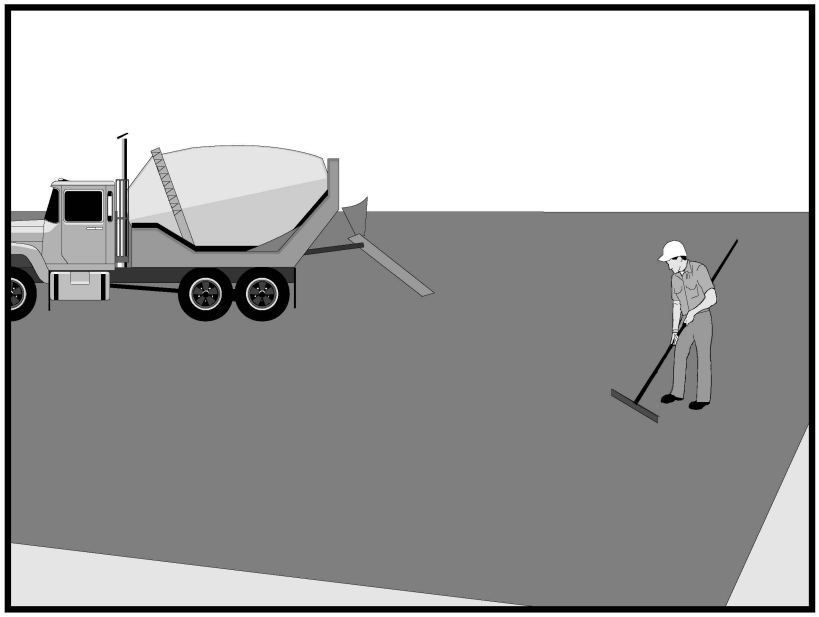
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Paving and Grinding Operations NS-3



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

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

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

Potential Alternatives

None

Description and Purpose

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

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

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

Suitable Applications

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

Limitations

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

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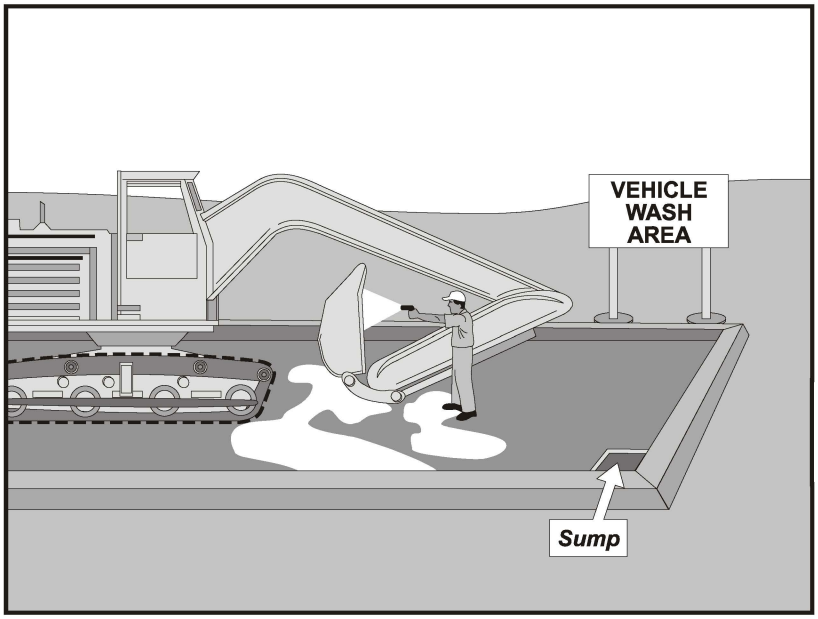
Vehicle and Equipment Cleaning NS-8



Categories

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

Legend:

☑ **Primary Objective**

☒ **Secondary Objective**

Targeted Constituents

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

Potential Alternatives

None

Description and Purpose

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

Suitable Applications

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

Limitations

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

Implementation

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

If washing operations are to take place onsite, then:

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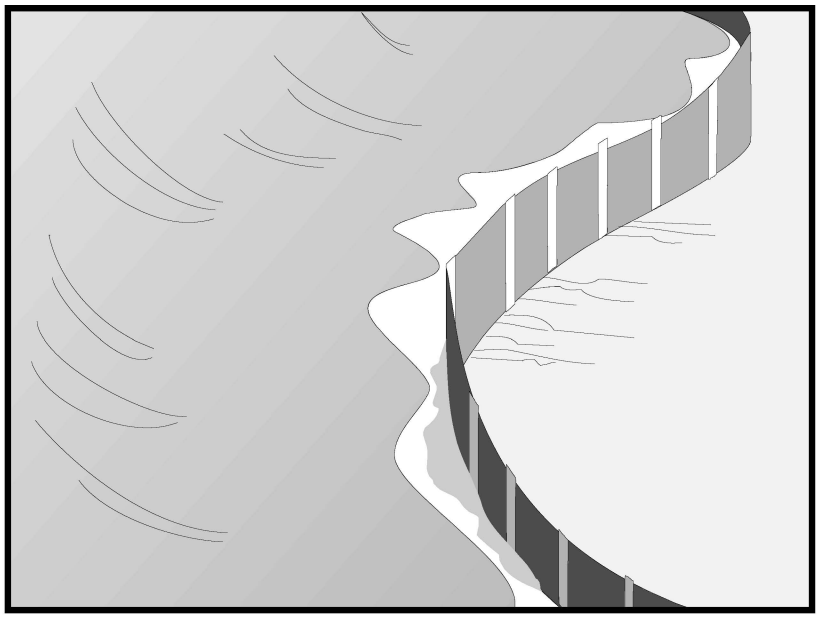
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Silt Fence SE-1



Categories

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

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-10 Storm Drain Inlet Protection

SE-14 Biofilter Bags

Description and Purpose

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

Suitable Applications

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

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

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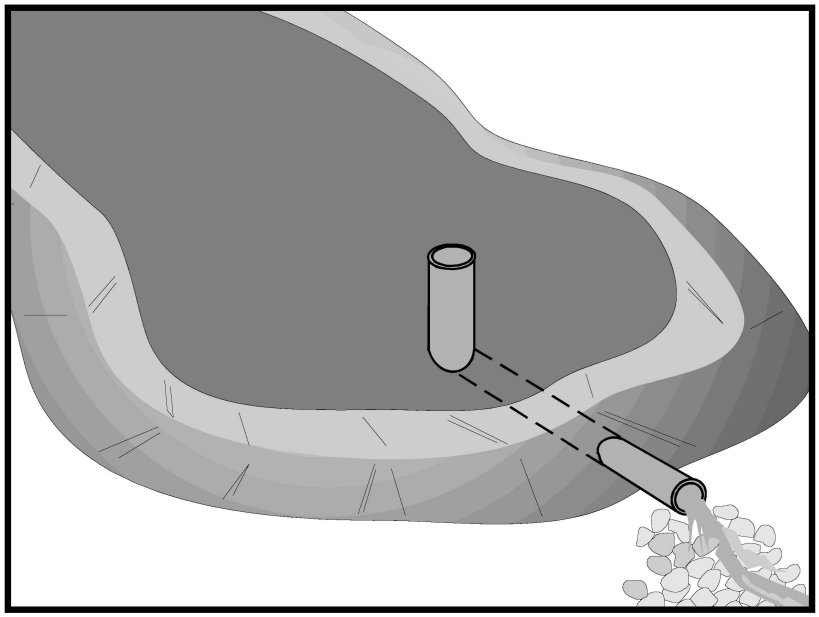
Sediment Basin SE-2



Description and Purpose

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

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

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

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

Categories

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

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☑
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-3 Sediment Trap (for smaller areas)

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CALIFORNIA STORMWATER QUALITY ASSOCIATION

Street Sweeping and Vacuuming SE-7

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

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

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

Potential Alternatives

None

Description and Purpose

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

Suitable Applications

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

Limitations

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

Implementation

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

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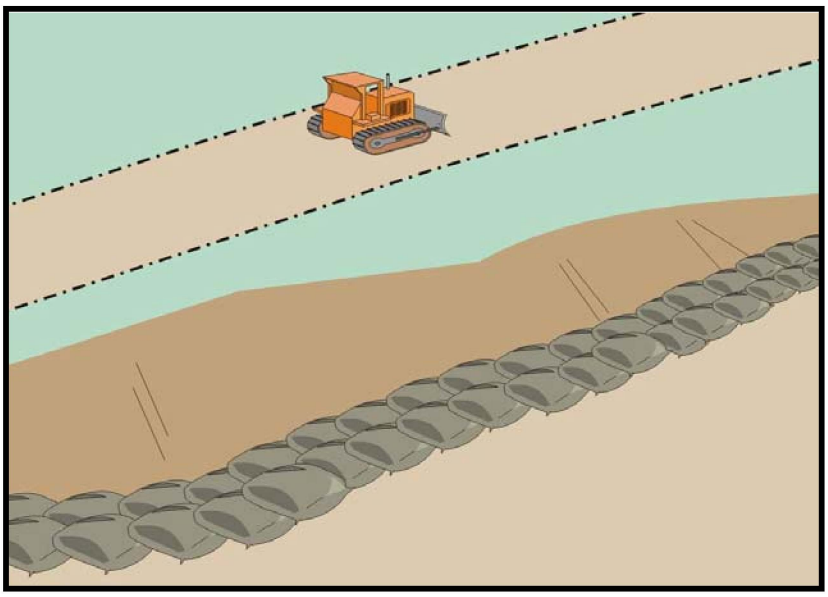
CALIFORNIA STORMWATER QUALITY ASSOCIATION

Sandbag Barrier SE-8



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

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

Description and Purpose

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

Suitable Applications

Sandbag barriers may be suitable:

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

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

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

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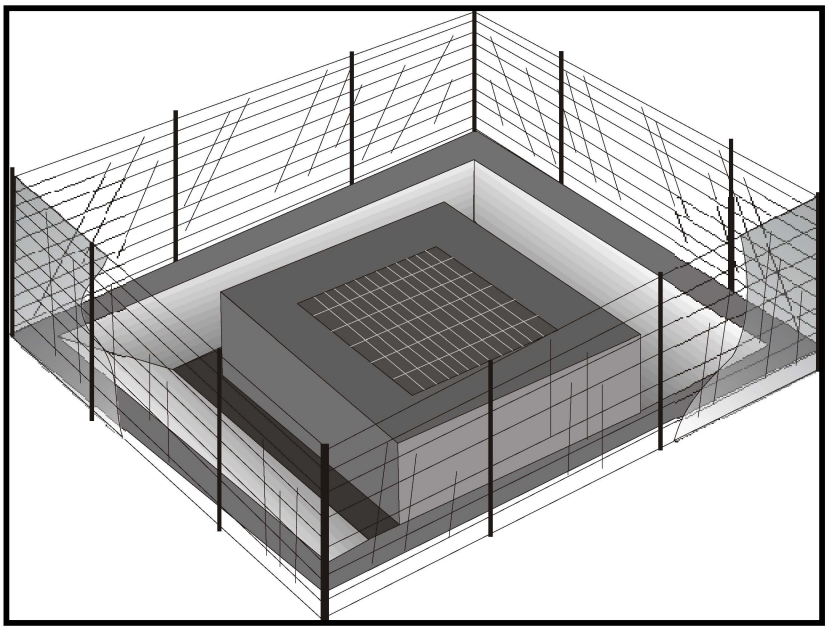
Storm Drain Inlet Protection SE-10



Categories

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

Legend:

☑ **Primary Category**

☒ **Secondary Category**

Targeted Constituents

Sediment	☑
Nutrients	
Trash	☒
Metals	
Bacteria	
Oil and Grease	
Organics	

Potential Alternatives

SE-1 Silt Fence

SE-5 Fiber Rolls

SE-6 Gravel Bag Berm

SE-8 Sandbag Barrier

SE-14 Biofilter Bags

Description and Purpose

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

Suitable Applications

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

Limitations

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

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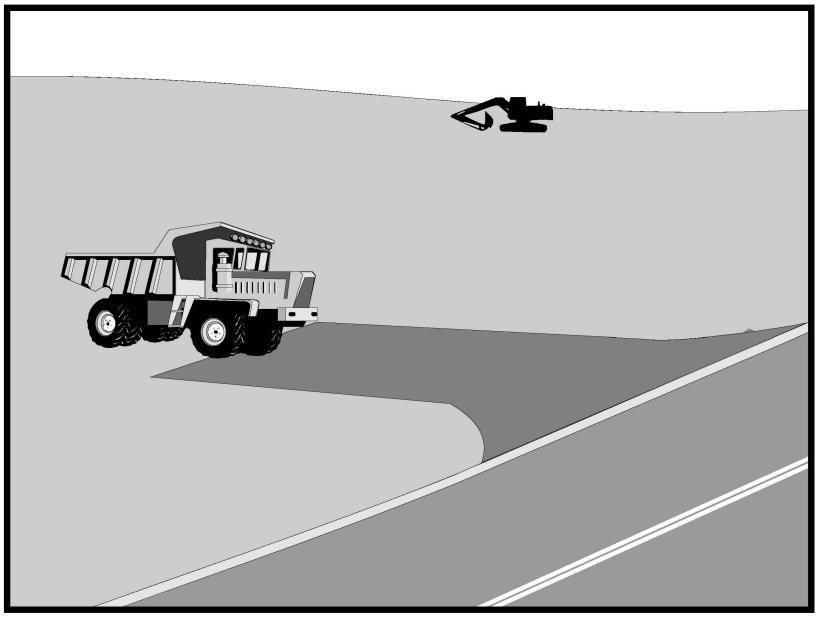
Stabilized Construction Entrance/Exit TC-1



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

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

Description and Purpose

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

Suitable Applications

Use at construction sites:

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

Limitations

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

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

Potential Alternatives

None

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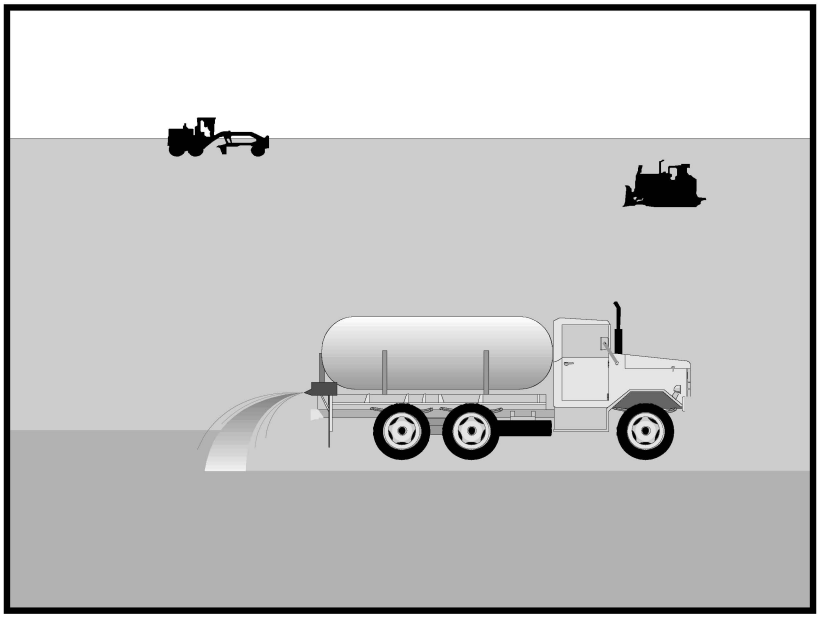
Wind Erosion Control WE-1



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

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

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

Potential Alternatives

EC-5 Soil Binders

Description and Purpose

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

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

Suitable Applications

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

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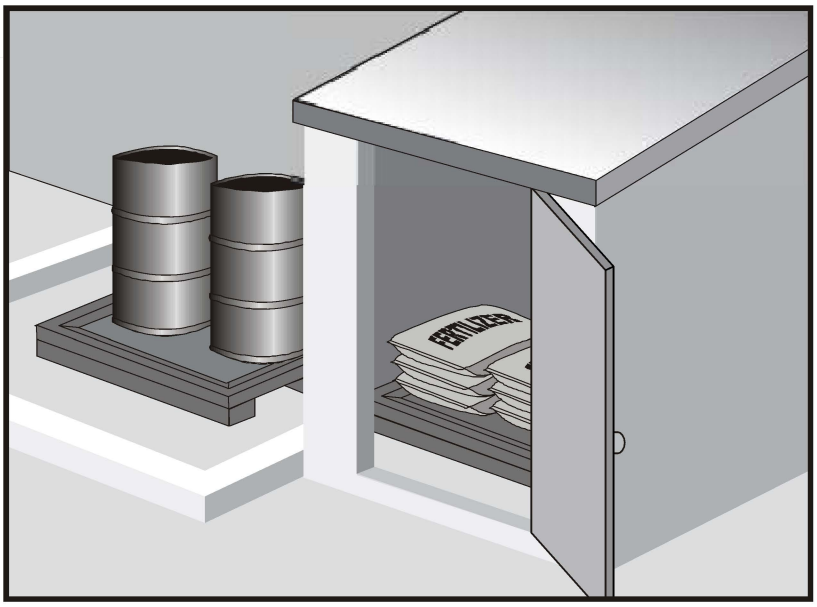
Material Delivery and Storage WM-1



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

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

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

Potential Alternatives

None

Description and Purpose

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

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

Suitable Applications

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

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

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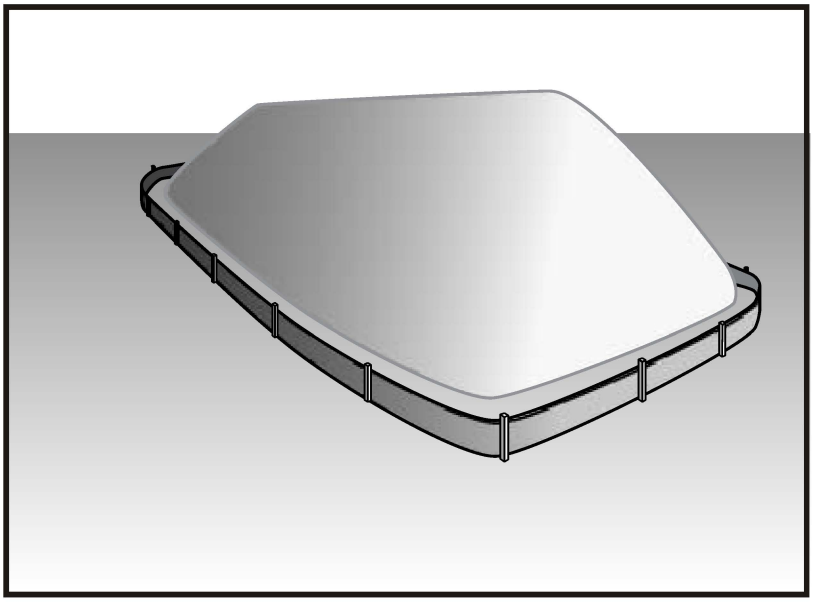
Stockpile Management WM-3



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

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

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

Potential Alternatives

None

Description and Purpose

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

Suitable Applications

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

Limitations

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

Implementation

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

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