5.11 Utilities and Service Systems

5.11 UTILITIES AND SERVICE SYSTEMS

The utilities and service systems analysis includes water, wastewater (sewer), solid waste, natural gas, electricity, and telecommunications. This section presents existing conditions, which provide the necessary baseline information. Criteria by which an impact may be considered potentially significant are provided, along with a discussion of potential impacts pursuant to *CEQA Guidelines* Appendix G. Mitigation measures are identified to avoid or lessen potential impacts, where necessary.

This section is based on the following documentation:

- Sewer Area Study Raytheon Campus (Sewer Study) (Psomas, March 21, 2013);
- Water System Study Raytheon Campus (Water Study) (Psomas, March 21, 2013); and
- Water Supply Assessment El Segundo South Campus Specific Plan (WSA) (RBF Consulting, April 2013).

These studies are provided in their entirety in Appendices 10.9, 10.10, and 10.11, respectively. The Sewer and Water Studies were peer reviewed by RBF Consulting in February 2013. This section is also based upon information from public service and utility agencies; refer to Appendix 10.2, *Notice of Preparation and Comment Letters*, and Appendix 10.12, *Utility Correspondence*.

5.11.1 EXISTING REGULATORY SETTING

WATER

State of California

URBAN WATER MANAGEMENT ACT

The Urban Water Management Plan Act (UWMP Act) was passed in 1983 and codified at Water Code §§ 10610 through 10657. Since its adoption in 1983, the Act has been amended on several occasions. In 2004, the Act was amended to require additional discussion of transfer and exchange opportunities, non-implemented demand management measures, and planned water supply projects. Most recently, in 2005, the Act was amended to require water use projections (required by Water Code § 10631) to include projected water use for single-family and multi-family residential housing needed for lower income households. In addition, Government Code § 65589.7 was amended to require local governments to provide a copy of the adopted housing element to water and sewer providers. The Act requires "every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet (AF) of water annually, to prepare and adopt, in accordance with prescribed requirements, an urban water management plan." Urban water suppliers must file these plans with the California Department of Water Resources every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. As required by the Memorandum of Understanding Regarding Urban Water Conservation in California and Assembly Bill 11 (Filante, 1991), the 2005 UWMP Act, incorporated water conservation initiatives, and a Water Shortage Contingency Plan.

WATER CONSERVATION ACT OF 2009

Water Code §§ 10800, *et seq.* creates a framework for future planning and actions by urban (and agricultural) water suppliers to reduce California's water use. The law requires urban water suppliers to reduce statewide per capita water consumption by 20 percent by 2020. Additionally, the State is required to make incremental progress towards this goal by reducing per capita water use by at least 10 percent by 2015. Each urban retail water supplier was required to develop water use targets and an interim water use target by July 1, 2011. Each urban retail water supplier was required, by July 2011, to include in their water management plan the baseline daily per capita water use, water use target, interim water use target, and compliance daily per capita water use.

SENATE BILL 610

Water Code §§ 10610 to 10656 require water suppliers to prepare an UWMP to promote water demand management and efficient use in their service areas. UWMPs are included with the environmental document for specified projects.

In regard to water supply, the Water Code requires preparation of a Water Supply Assessment (WSA) for certain projects.[1] The Water Code requires that a WSA be prepared for any "project" which would consist of one or more of the following:[2]

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A mixed-use project that includes one or more of the projects specified above; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

SENATE BILL 221

Senate Bill 221 (SB 221)[3] amended state law to improve the link between information on water supply availability and land use at the tentative map preparation phase of a project. SB 610 and SB 221 are companion measures which seek to:

- Promote more collaborative planning between local water suppliers and cities and counties;

[1] Water Code §§ 10910–10915.
[2] Water Code § 10910(b).
[3] Business and Professions Code § 11010 and Government Code § 66473.4.

- Require that detailed information regarding water availability be provided to city and county decision-makers prior to approval of specific large development projects;
- Require that this detailed information be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects; and
- Recognize local control and decision making regarding the availability of water for projects and the approval of projects.

SB 221 pertains only to residential projects and establishes the relationship between the WSA prepared for a project and the project approval under the Subdivision Map Act. As the Project does not involve a residential land use, SB 221 is not applicable.

EFFICIENCY STANDARDS

Title 24 of the California Code of Regulations contains the California Building Code, including the California Plumbing Code (Part 5), which promotes water conservation. California Code of Regulations, Title 20, addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, a number of California laws listed below require water-efficient plumbing fixtures in structures:

- Title 20 California Code of Regulations § 1604(g) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.
- Title 20 California Code of Regulations § 1606 prohibits the sale of fixtures that do not comply with established efficiency regulations.
- Title 24 California Code of Regulations §§ 25352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.
- Health and Safety Code § 17921.3 requires low-flush toilets and urinals in virtually all buildings.

Regional

COUNTY OF LOS ANGELES FIRE DEPARTMENT

The County of Los Angeles Fire Department (LACFD) Land Development Unit (LDU) sets Fire Department conditions specifically with regards to water and access on every land development issue within Los Angeles County. The LDU reviews all subdivisions and applies fire flow and hydrant spacing requirements, in accordance with LACFD regulations and the property's zoning. LACFD's fire prevention regulations provide standards for fire flow, hydrant spacing, and specifications.[4]

[4] County of Los Angeles Fire Department Website, *Fire Prevention Regulations*, http://fire.lacounty.gov/FirePrevention/PDFs/Reg/fpr_ch7_8.pdf, Accessed April 26, 2013.

WEST BASIN MUNICIPAL WATER DISTRICT 2010 URBAN WATER MANAGEMENT PLAN

The Project site is located within the jurisdiction of the West Basin Municipal Water District (West Basin). In compliance with legislative requirements, West Basin prepared the West Basin Municipal Water District 2010 Urban Water Management (West Basin UWMP). The West Basin UWMP details how West Basin manages their water supplies and demands under all hydrology conditions. The West Basin UWMP also demonstrates how West Basin proposes to meet their service area's retail demands over the next 25 years and provide long-term water reliability. According to West Basin UWMP Table 3-4, El Segundo's total water demands are anticipated to remain relatively stable through Year 2035, which includes plans to reduce per capita water consumption pursuant to WCA requirements. The West Basin UWMP concludes that West Basin does not anticipate any shortages and will be able to provide reliable water supplies under both single dry year and multiple dry year conditions.[5]

City of El Segundo

EL SEGUNDO URBAN WATER MANAGEMENT PLAN

In compliance with the State mandate and accordance with the best practices of water management, the City prepared the City of El Segundo 2010 Urban Water Management Plan (El Segundo UWMP). The Plan's goals include to: provide a local perspective on current and proposed water conservation programs and efforts; evaluate potential conservation methods; and identify improvements to City programs, as appropriate. According to the El Segundo UWMP, significant growth or increase in water demands are not anticipated in future years as the City is almost completely built-out. As noted in El Segundo UWMP Table ES-1, which summarizes the City's total past, current, and future water demands, the City's forecast water demand would remain relatively stable through Year 2030, at approximately 17,500 acre feet per year (AFY). The El Segundo UWMP concludes that the that the supply available to the City, as estimated based on groundwater pumping and as provided in the West Basin UWMP and Metropolitan UWMP, meets the total demand, including during multiple dry year scenarios.[6]

EL SEGUNDO MUNICIPAL CODE

El Segundo Municipal Code (ESMC) Chapter 11-1, *Water Services*, establishes the rules, regulations, and rates for and governing water service from the City's waterworks system. Project Applicants are responsible for the construction of all water conveyance facilities pursuant to uniform codes, the ESMC, and Public Works engineering standards.

WASTEWATER

Federal

FEDERAL CLEAN WATER ACT (33 USC §§ 1251, *ET SEQ*.)

The primary goals of the Clean Water Act (CWA) are to restore and maintain the chemical, physical, and biological integrity of the nation's waters and to make all surface waters fishable

[5] RMC, *West Bain Municipal Water District 2010 Urban Water Management Plan*, Page ES-4, June 2011.
[6] Risk Management Professionals, *City of El Segundo 2010 Urban Water Management Plan*, Page 5-21, September 2011.

and swimmable. The CWA forms the basic national framework for the management of water quality and the control of pollution discharges; it provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, antidegradation policy, nonpoint-source discharge programs, and wetlands protection. The United States Environmental Protection Agency (USEPA) has delegated the responsibility for administration of portions of the CWA to state and regional agencies. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting program and is responsible for developing NPDES permitting requirements. The SWRCB works in coordination with the Regional Water Quality Control Boards (RWQCB) to preserve, protect, enhance, and restore water quality. The City is within the jurisdiction of the Los Angeles RWQCB (LARWQCB).

The Municipal Storm Water Permitting Program regulates storm water discharges from municipal separate storm sewer (drain) systems (MS4s). Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Los Angeles County Flood Control District, the County of Los Angeles, and the City of El Segundo along with 83 other incorporated cities therein (Permittees) discharge pollutants from their MS4s. Storm water and non-storm water enter and are conveyed through the MS4 and discharged to surface water bodies of the Los Angeles Region. These discharges are regulated under countywide waste discharge requirements contained in Order No. R4-2012-0175[7] (NPDES Permit No. CAS004001, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges Within the Coastal Watersheds of Los Angeles County, Except Discharges Originating from the City of Long Beach MS4)*, which was adopted November 8, 2012.[8] The MS4 Permit Order provides the revised waste discharge requirements for MS4 discharges within the Los Angeles County watersheds, which includes the City of El Segundo. The MS4 Permit Order became effective December 28, 2012.

Wastewater originating from the Project site is treated by District No. 5 of the County Sanitation Districts of Los Angeles County (Districts) at their Joint Water Pollution Control Plant (JWPCP), located at 24501 South Figueroa Street in the City of Carson. Before discharge into the Pacific Ocean through a network of outfalls, the treated wastewater is disinfected with hypochlorite. These outfalls extend two miles off the Palos Verdes Peninsula to a depth of 200 feet. The JWPCP must comply with its current NPDES Permit, which regulates its discharges. Specifically, the LARWQCB adopted the Waste Discharge Requirements (WDRs) and NPDES Permit - Joint Outfall System, Joint Water Pollution Control Plant (NPDES Permit No. CA0053813, Order No. R4-2011-0151), which became effective October 1, 2011.[9]

U.S. ENVIRONMENTAL PROTECTION AGENCY

The U.S. Environmental Protection Agency (EPA) is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established Federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that

[7] State of California Water Quality Control Board Los Angeles Region Website, http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf, Accessed May 8, 2013.

[8] Ibid.

[9] State of California Water Quality Control Board Los Angeles Region Website, http://www.waterboards.ca.gov/rwqcb4/board_decisions/adopted_orders/by_permits_tools.shtml, Accessed April 25, 2013.

are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), which is a form of nitrogen oxides (NO_X), sulfur dioxide (SO_2), which is a form of sulfur oxides (SO_x), particulate matter less than 10 microns in aerodynamic diameter (PM_{10}), particulate matter less than 2.5 microns in aerodynamic diameter ($PM_{2.5}$), and lead (Pb); refer to Table 5.3-1, *National and California Ambient Air Quality Standards*.

State

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 5.3-1, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California.

Compliance with the CCAA requires that sanitation districts base their wastewater treatment plants' design capacities on the regional growth forecasts adopted by the Southern California Association of Governments (SCAG); refer to Section 6.3, *Growth-Inducing Impacts*. Specific SCAG regional growth forecast policies are incorporated into the Clean Air Plans prepared by Air Quality Management Districts. The Project site is located within jurisdiction of the South Coast Air Quality Management District (SCAQMD), which prepared the 2012 Air Quality Management Plan (2012 AQMP) to improve air quality in the South Coast Air Basin. As previously noted, wastewater originating from the Project is treated at the Districts' JWPCP, which has a design capacity of 400 MGD and an available capacity of 134.6 MGD.[10] Any expansion of the Districts' facilities must be sized and service phased in a manner that would be consistent with SCAG's regional growth forecast for the County of Los Angeles, among the others. The available capacity of the Districts' treatment facility is, therefore, limited to levels associated with the approved growth identified by SCAG.

Local

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

The Districts are authorized by the Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' sewerage system or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected.[11] This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the sewerage system to accommodate a proposed project. Payment of a connection fee is required before a permit to connect to the sewer is issued.

[10] Written Correspondence: Raza, Adriana, Customer Service Specialist, County Sanitation Districts of Los Angeles County, November 28, 2012.
[11] Ibid.

El Segundo Municipal Code

ESMC Title 12, *Public Sewer Facilities*, is intended to:

- Protect the public health, safety, and welfare by providing for beneficial public use of the City sewer system through regulation of sewer construction, sewer use, and industrial wastewater discharges;
- Prevent any discharge which may reasonably interfere with the operation of the system;
- Provide for equitable distribution of the sewer system costs;
- Provide procedures for complying with requirements placed on the City by State and Federal laws; and
- Provide funds for the operation and maintenance of the City sewer system by imposing a service charge upon the users of these facilities.

Pursuant to ESMC § 12-3-1, *Permits Required*, no person may connect to or tap a public sewer of the City or maintain a connection or tap to such sewer without obtaining a permit from the Director of Public Works.

ESMC § 12-3-3, *Excessive Discharge of Sewage*, states that no permit may be issued to connect to or tap a public sewer unless said sewer has sufficient sewage capacity to receive the intended discharge. The Director of Public Works may require the discharger to restrict the discharge until sufficient capacity is available, or to construct a public sewer to provide sufficient capacity. The Director of Public Works may refuse service to persons locating facilities in areas where their proposed quantity or quality of sewage or industrial wastewater is unacceptable to the available treatment facility.

ESMC § 12-3-5, *Fees*, no permit to connect to or tap a public sewer will be issued unless the prescribed Sewer Connection Fees have been paid to the City.

SOLID WASTE

State of California

SOLID WASTE MANAGEMENT

The California Integrated Waste Management Act of 1989 (aka "AB 939" found at Public Resources Code, §§ 40000, *et seq*.) was adopted to "reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible." CalRecycle is the new California department concerned with the State's recycling and waste reduction efforts, including the implementation of AB 939. Officially known as the Department of Resource Recycling and Recovery, CalRecycle is a part of the California Natural Resources Agency and administers programs formerly managed by the California Integrated Waste Management Board and Division of Recycling. CalRecycle has broad authority related to solid waste handling, disposal, and reclamation. Under this Act, the CIWMB initially (1) created a State solid waste management and resource recovery policy; (2) developed minimum standards for solid waste handling and disposal; and (3) approved county Solid Waste Management Plans (SWMP).

AB 939 establishes a waste management hierarchy as follows:

- Source Reduction;
- Recycling;
- Composting;
- Transformation; and
- Disposal.

The law also requires that each county prepare a new Integrated Waste Management Plan and each city prepare a Source Reduction and Recycling Element (SRRE) by July 1, 1991. The SRRE is required to identify how each jurisdiction will meet the mandatory state waste diversion goal of 50 percent by the year 2000. The Act mandated that California's 450 jurisdictions (i.e., cities, counties, and regional waste management compacts), implement waste management programs aimed at a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. If the 50 percent goal was not met by the end of 2000, the jurisdiction was required to submit a petition for a goal extension to CalRecycle. Senate Bill (SB) 2202 made a number of changes to the municipal solid waste diversion requirements under the Integrated Waste Management Act. These changes included a revision to the statutory requirement for 50 percent diversion of solid waste to clarify that local governments shall continue to divert 50 percent of all solid waste on and after January 1, 2000.

The per capita disposal rate is a jurisdiction-specific index, which is used as one of several "factors" in determining a jurisdiction's compliance with the intent of AB 939, and allows CalRecycle and jurisdictions to set their primary focus on successful implementation of diversion programs. Meeting the disposal rate targets is not necessarily an indication of compliance. CalRecycle reports that El Segundo's Disposal Rate Targets for Reporting Year 2011 were 44.2 pounds per day (PPD) per Resident and 15.1 PPD per Employee.[12]

El Segundo General Plan Source Reduction and Recycling Element

In June 1991, the City adopted its Source Reduction and Recycling Element for the City General Plan in accordance with AB 939. The City's Solid Waste Recycling Services Division is responsible for implementing and monitoring the City's Source Reduction and Recycling (SRRE) Program. For the 2011 reporting year, El Segundo implemented a total of 32 diversion programs. For 2011, the most recent reporting year, El Segundo's calculated Disposal Rates were 26.1 PPD per resident and 7.4 PPD per employee, which were less than their Disposal Rate Targets.[13] Therefore, based on preliminary data, the City is currently achieving AB 939's diversion requirement. Based on 2008 figures, El Segundo was number one among local California agencies in diverting solid waste to recycled products or other uses.[14]

[12] CalRecycle Website, http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=JurisdictionID%3d145%26BeginYear%3d2011%26EndYear%3d2011%26ReportName%3dARDRPopEmpTrendExternal%26ShowParameters%3dfalse%26AllowNullParameters%3dFalse, Accessed March 6, 2013.

[13] Ibid.

[14] City of El Segundo Business Website, http://elsegundobusiness.com/biz_top.htm, Accessed April 24, 2013.

DRY UTILITIES

State of California

All new construction in California is subject to the energy conservation standards set forth in California Code of Regulations Title 24, Part 6, Article 2. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. Title 24 addresses the use of energy-efficient building standards, including ventilation, insulation, and construction, as well as the use of energy saving appliances, conditioning systems, water heating, and lighting.

CALIFORNIA BUILDING STANDARDS CODE

California Code of Regulations Title 24, California Building Standards Code (CBC), governs the design and construction of all building occupancies and associated facilities and equipment throughout California. The Energy Efficiency Standards for Residential and Nonresidential Buildings were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The most recent standards were adopted by the CPUC in 2005 as mandated by AB 970 to reduce California's electricity demand. The standards emphasize energy efficiency measures that save energy at peak periods and seasons, improve the quality of installation of energy efficiency measures, incorporate recent publicly funded building science research, and collaborate with California utilities to incorporate results of appropriate market incentives programs for specific technologies.

CALIFORNIA GREEN BUILDING STANDARDS CODE

In 2010, the CBC was amended to include more stringent requirements. Specifically, the amendments involved part 11 of the CBC known as the California Green Building Standards Code (CALGreen Code) and took effect January 1, 2011. The provisions of the CALGreen Code are directed to energy efficiency standards regulated by the California Energy Commission (CEC) and State-owned buildings, among other types of occupancies. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations, such as those within Section V (Site Lighting) including Subpart E (Windows), F (Roofs), and S (Mechanical Equipment). These savings are cumulative, increasing as years go by. For the purposes of mandatory energy efficiency standards for non-residential developments, the CALGreen Code defers to the mandatory building standards adopted by the CEC.

El Segundo Municipal Code

Pursuant to ESMC Chapter 13-17, *Green Building Standards Code*, the City has adopted by reference the California Green Building Standards Code, 2013 Edition (California Code of Regulations Title 24, Part 11).

Pursuant to ESMC § 12-3-1, *Permits Required*, no person shall connect to or tap a public sewer of the City or maintain a connection or tap to such sewer without obtaining a permit from the Director of Public Works.

ESMC § 12-3-3, *Excessive Discharge of Sewage*, states that no permit shall be issued to connect to or tap a public sewer unless said sewer has sufficient sewage capacity to receive the intended discharge. The Director of Public Works may require the discharger to restrict the discharge until sufficient capacity is available, or to construct a public sewer to provide sufficient capacity. The Director of Public Works may refuse service to persons locating facilities in areas where their proposed quantity or quality of sewage or industrial wastewater is unacceptable to the available treatment facility.

ESMC § 12-3-5, *Fees*, no permit to connect to or tap a public sewer shall be issued unless the prescribed Sewer Connection Fees have been paid to the City.

5.11.2 EXISTING ENVIRONMENTAL SETTING

WATER

Water Supplies

The Project site is located within the jurisdiction of the West Basin Municipal Water District (West Basin). According to West Basin UWMP Figure 4-1, *West Basin Service Area Projected Water Supplies*, West Basin's 2010 water supply portfolio was comprised of: 63 percent imported water; 21 percent groundwater; 8 percent recycled water; 8 percent conservation; and 0.3 percent desalination.

Imported Water. West Basin purchases imported water from the Metropolitan Water District of Southern California (MWD) and wholesales the imported water to cities and private companies in southwest Los Angeles County, including El Segundo. MWD supplies water from the Colorado River and Sacramento-San Joaquin Delta in Northern California via the State Water Project (SWP). Before delivery, MWD treats the imported SWP water at its Filtration Plants to standards set by the State of California. MWD delivers water to the City after it has been treated in the Joseph Jensen Filtration Plant (located in Granada Hills) and/or the F.E. Weymouth Filtration Plant (located in La Verne).

Groundwater. The groundwater supply is extracted from the West Coast Groundwater Basin (Basin), which underlies much of the West Basin service area including El Segundo. Because the Basin is adjudicated (i.e., the amount to be extracted each year has been determined by a court decision), the rights to the amount of groundwater extracted each year remain virtually the same. Total adjudicated pumping rights in the Basin remain at approximately 55,000 acre-feet per year (AFY). Although, El Segundo maintains water rights to 953 AFY from the adjudicated Basin, the City does not use groundwater as a potable water source. Instead, the City leases its yearly water rights to the City of Manhattan Beach. Refer to Section 5.8, *Hydrology and Water Quality*, for further discussion regarding groundwater.

Recycled Water. West Basin is a wholesale provider of potable and recycled water supplying several Los Angeles County cities including El Segundo. The City, in turn, serves recycled water to 17 sites within its jurisdiction.

Water Demand

Table 5.11-1, *Existing Potable Water Demand*, quantifies the Project site's existing water demand. As shown, the site's existing average daily demand is estimated at 396,300 gallons per day (gpd) (444.0 AFY).

Table 5.11-1
Existing Potable Water Demand

Facility Description	Building Area (Gross sf)	Flow Factor	Units	Average Flow (gpd)
Office	1,180,962	200	gpd/ksf	236,192
Laboratory	352,129	200	gpd/ksf	70,426
Manufacturing	433,037	200	gpd/ksf	86,607
Warehouse	122,962	25	gpd/ksf	3,074
Total	***2,089,090***			***396,300***

Notes: sf = square feet; gpd = gallons per day; and ksf = 1,000 square feet.
Source: RBF Consulting, *Water Supply Assessment El Segundo South Campus Specific Plan Table 3*, April 2013.

Water Facilities

WEST BASIN MUNICIPAL WATER DISTRICT

Most of West Basin's service area is served from the MWD West Basin (WB) and West Coast (WC) Feeders through several turnouts. Both feeders are fed by the MWD Sepulveda Feeder, which is aligned along Van Ness Avenue. Water is provided to El Segundo via the WC Feeder pipeline, a 61-inch pipeline aligned along El Segundo Boulevard, and at two local connections: WB-03; and WB-28. The WB-03 connection is located at the Manhattan Beach Boulevard/ Redondo Avenue intersection, approximately 1.5 miles south/southeast of the Project site. The WB-28 connection is located at the northwesterly corner of the El Segundo Boulevard/Nash Street intersection, immediately north of the Project site.

EL SEGUNDO PUBLIC WORKS DEPARTMENT

The City of El Segundo has been identified as the water purveyor for the proposed Project. The City owns and operates a potable water distribution system for water service of residential and non-residential uses. The City operates a domestic water system serving approximately 17,050 customers, and consisting of 57.5 miles of pipeline. The water system is comprised of one pump station, two storage reservoirs, and one elevated storage tank. The El Segundo Public Works Department Water Division performs the operation, maintenance, and repair of the City's water distribution system. The City also works with West Basin in serving recycled water for industrial uses and landscape irrigation from West Basin's regional recycled water system.

The Project site is located within the City's High Pressure Zone and served by the following City water transmission lines:

- *P13*: This is a 27-inch water main located along the Project site's eastern boundary, within the property line; and

- *P23:* This is a 27-inch water main located within El Segundo Boulevard.

The Project site is served by a 10-inch diameter water line that loops through the site; refer to Exhibit 5.11-1, *Existing Potable Water System*. As illustrated on Exhibit 5.11-1, the onsite potable water system connects to the City's system at two locations: with P13, the junction is approximately mid-way along the eastern property line; and with P23, the junction is within El Segundo Boulevard, just east of Continental Boulevard.

The City provides recycled water to the Project site for landscape irrigation. The Project site is served by one West Basin 42-inch recycled water main line (WB-28) within El Segundo Boulevard. As illustrated on Exhibit 5.11-2, *Existing Reclaimed Water System*, the onsite recycled water system connects to WB-28 via a 6.0-inch City lateral (P19) located near the intersection of El Segundo Boulevard and Continental Boulevard.

The water supply reliability, which is based on El Segundo's and West Basin's UWMPs, is examined in detail in WSA Section D, *Water Supply Reliability*, and summarized, as follows:

- *Normal Conditions*. Under normal conditions, the City's average current (2010) water demand is 9,929 AFY and forecast 2035 water demand is 9,216 AFY. As indicated in WSA Table 8, West Basin anticipates meeting demands under normal conditions through current supplies.

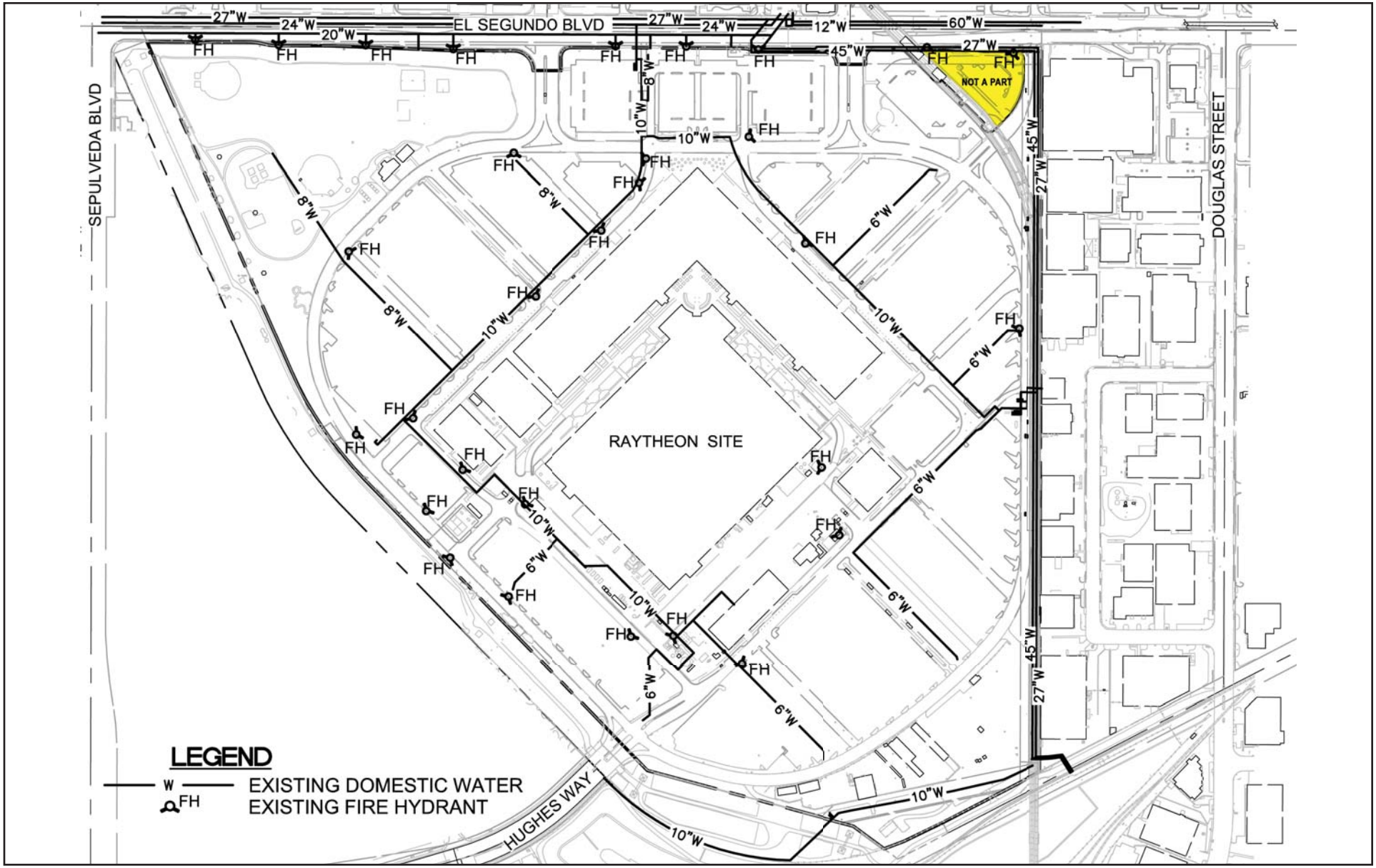
- *Single Dry Year Conditions*. Under single dry year conditions, the City's forecast 2035 water demand is 9,952 AFY. As indicated in WSA Table 9, West Basin anticipates meeting single dry year demands, which would be accomplished by increasing supplies. West Basin is able to meet the increased demands because of the surplus in supply that has been planned for in previous years to ensure West Basin can meet customer demands with varied climate conditions.

- *Multiple Dry Year Conditions*. Under multiple dry year conditions, the City's forecast 2035 water demand is between 9,436 and 9,645 AFY. As indicated in WSA Table 10, the shortage of supply for each dry year is between 2.8 and 5.0 percent. In order to reduce water demand during times of drought, the City would implement their water shortage contingency plan; refer to WSA Tables 11 and 12. The City would continue to implement their mandatory water conservation measures, which are in effect at all times, as well as the mandatory prohibitions on water uses based on rationing stages.

WASTEWATER

Wastewater Generation

Existing wastewater flow from the Project site was estimated using the Districts' generation factors; refer to Table 5.11-2, *Existing Wastewater Generation*. As shown, the site's existing wastewater generation is estimated at 396,300 gpd.



Source: PSOMAS, *Water System Study*, March 21, 2013.

NOT TO SCALE

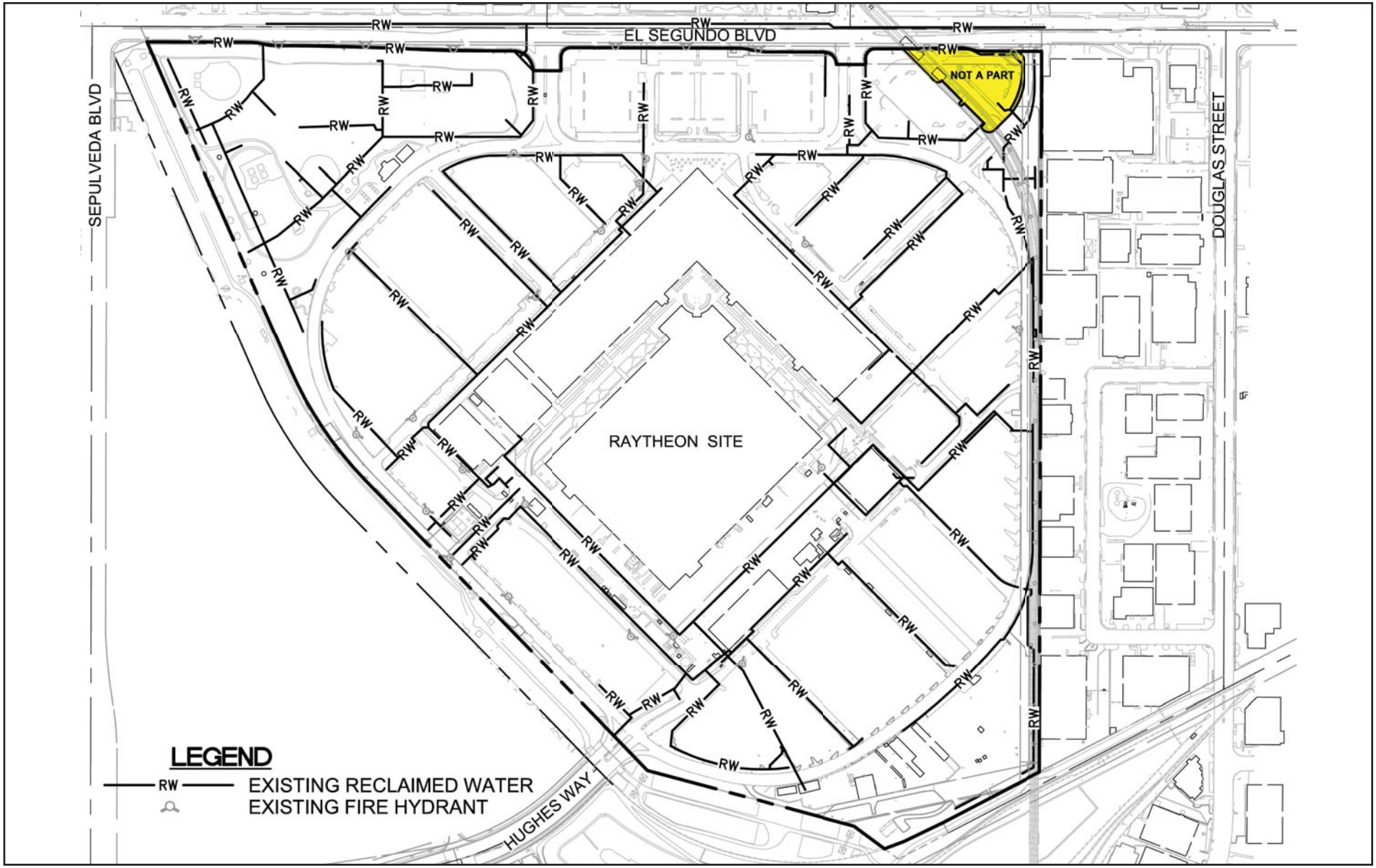
RBF CONSULTING A Baker Company

07/14 • JN 10-107917 (130148)

ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Existing Potable Water System

Exhibit 5.11-1



Source: PSOMAS, *Water System Study*, March 21, 2013.

NOT TO SCALE

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07/14 • JN 10-107917 (130148)

ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Existing Reclaimed Water System

Exhibit 5.11-2

Table 5.11-2
Existing Wastewater Generation

Facility Description	Building Area (Gross sf)	Flow Factor	Units	Average Flow (gpd)
Office	1,180,962	200	gpd/ksf	236,192
Laboratory	352,129	200	gpd/ksf	70,426
Manufacturing	433,037	200	gpd/ksf	86,607
Warehouse	122,962	25	gpd/ksf	3,074
Total	***2,089,090***			***396,300***

Notes: sf = square feet; gpd = gallons per day; and ksf = 1,000 square feet.
Source: Psomas, *Sewer Area Study Raytheon Campus Table 2*, March 21, 2013.

Wastewater Facilities

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

Wastewater System. Wastewater flow originating from the Project site discharges to a local (City) sewer, before it is conveyed to the Districts' trunk sewer, located in Aviation Boulevard, at El Segundo Boulevard. This 18-inch diameter trunk sewer has a design capacity of 2.2 million gallons daily (MGD) and conveyed a peak flow of 1.6 MGD, when last measured in 2011.[15]

Wastewater Treatment. Wastewater originating from the Project site is treated by District No. 5 at its JWPCP. The facility, which has a design capacity of 400 MGD, provides both primary and secondary treatment of approximately 264.1 MGD of wastewater.[16]

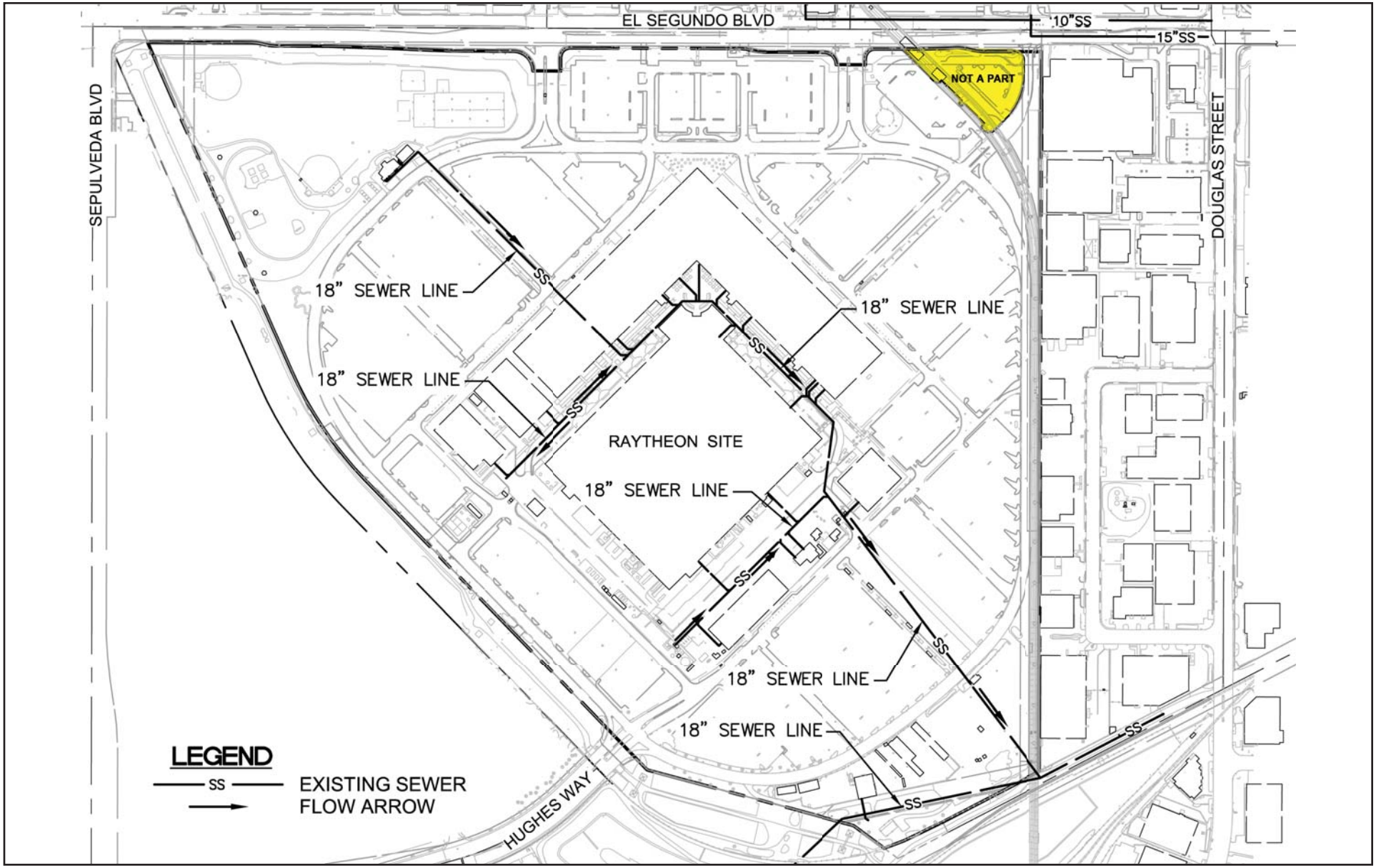
CITY OF EL SEGUNDO WASTEWATER SYSTEM

The City's Public Works Department Wastewater Division operates and maintains the City's wastewater system, which consists of nine lift stations, 18 pumps, and over 50 miles of mains.

Exhibit 5.11-3, *Existing Sewer System*, illustrates the Project site's existing wastewater system, which currently sewers entirely to the City's existing 21-inch trunk sewer (D-207) located near the southeast corner of the Project site. As illustrated on Exhibit 5.11-3, this trunk sewer increases to a 24-inch trunk at Aviation Boulevard, and proceeds to connect to the Districts' trunk sewer, located in Aviation Boulevard at El Segundo Boulevard. For purposes of this analysis, this trunk is referred to as "southerly trunk."

The Applicant has expressed an interest in connecting a portion of the proposed Project to the existing 15.0-inch trunk in El Segundo Boulevard. As illustrated on Exhibit 5.11-3, this trunk continues to Aviation Boulevard where it connects with the City trunk system and then gravity flows south to connect to the Districts' trunk. For purposes of this analysis, this trunk sewer is referred to as "northerly trunk."

[15] Written Correspondence: Raza, Adriana, Customer Service Specialist, County Sanitation Districts of Los Angeles County, November 28, 2012.
[16] Ibid.



Source: PSOMAS, *Water System Study*, March 21, 2013.

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EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Existing Sewer System

Exhibit 5.11-3

Exhibit 5.11-4, *Wastewater Network Diagram*, illustrates the wastewater network for the modeled infrastructure, as well as the surrounding area. A detailed review of each trunk analysis is presented below. Calculations of the existing and proposed scenario hydraulic modeling for both the average and peak conditions are shown in Appendix A of Appendix 10.9.

Southerly Trunk Capacity Analysis

There are no connections to this trunk through this entire alignment as smaller, parallel lines collect all the sewage from the parcels along this alignment. Therefore, one flow monitor placed at the southerly end of this trunk was deemed adequate to determine the capacity along the entire reach, as no additional wastewater enters the trunk downstream of the Project site.

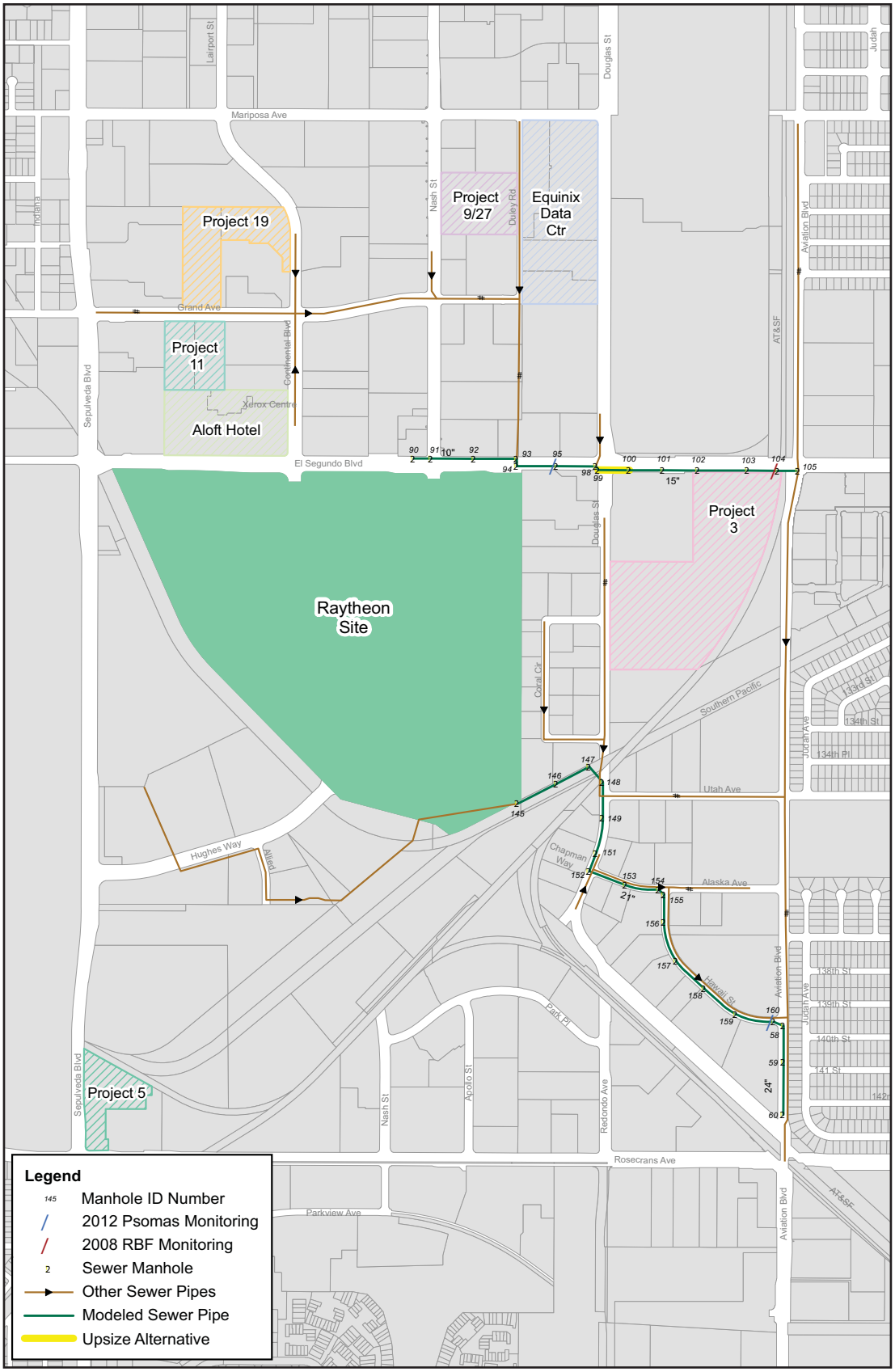
A trunk capacity analysis was conducted by Psomas to determine the available capacity along the entire reach of the southerly trunk serving the Project site. The analysis involved preparing a hydraulic model of the southerly trunk using a software program (H2O Map Sewer). The Study *Southerly trunk Analysis* Section details the methodology and assumptions used in the analysis. Flow monitoring from the downstream end of the system near the intersection of Aviation Boulevard and Hawaii Street was conducted, as summarized in Table 5.11-3, *Flow Monitoring Data Summary (Aviation Boulevard and Hawaii Street)*.

Table 5.11-3
Flow Monitoring Data Summary
(Southerly Trunk (Aviation Boulevard and Hawaii Street))

Date	Average Flow (MGD)	Maximum Flow (MGD)	Peaking Factor	Average Flow (cfs)	Maximum Flow (cfs)
03/24/12	0.077	0.137	1.779	0.119	0.212
03/25/12	0.078	0.230	2.949	0.121	0.356
03/26/12	0.145	0.409	2.821	0.224	0.663
03/27/12	0.126	0.308	2.444	0.195	0.477
03/28/12	0.134	0.355	2.649	0.207	0.549
03/29/12	0.130	0.266	2.046	0.201	0.412
03/30/12	0.127	0.436	3.433	0.197	0.675
Average	***0.132***	***0.355***	***2.680***	***0.181***	***0.473***

Source: Psomas, *Sewer Area Study Raytheon Campus Table 1*, March 21, 2013.

As indicated in Table 5.11-3, the highest weekday average flow was 0.145 MGD (0.224 cubic feet per second (cfs)). In order to be conservative, this highest average flow was used in the hydraulic model, instead of the average flow of 0.132 MGD. This represents the most conservative methodology for calibrating the average and peak sewer system models. Since the total average flow monitored in the southerly trunk was 0.145 MGD, equal to approximately 40 percent of the estimated existing flow using the LACSD flow factors (see *Wastewater Generation* Section above), an analysis of existing water meter records from the site was conducted. Based on potable water meter records from 2010, domestic water usage equates to approximately 0.151 MGD. Assuming 90 percent of the water metered returns to the sewer, the average wastewater flow would be 0.136 MGD. This would allow for an average flow of approximately 0.009 MGD for other parcels upstream of the Project site. However, to be conservative, the highest monitored flow was utilized for the existing flow conditions, which results in a maximum depth of flow to pipe diameter (d/D) of 24 percent at peak flow.



Source: PSOMAS, *Sewer Area Study*, March 21, 2013.

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ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Sewer Network Diagram

Exhibit 5.11-4

Northerly Trunk Capacity Analysis

The Applicant has expressed an interest in discharging a portion of the proposed Project's wastewater to the existing 15.0-inch trunk in El Segundo Boulevard (i.e., northerly trunk). Two previous studies were conducted for unrelated separate development projects to determine the available capacity along the northerly trunk. A trunk capacity analysis was conducted by RBF Consulting (*Sewer Capacity Study for the El Segundo Boulevard Sewer System*, 2008) relative to separate development projects; refer to Appendix A of Appendix 10.9. Specifically, the RBF study was conducted to determine if adequate capacity existed in the 15.0-inch northerly trunk for a data center project (Cumulative Project #8 [EA #784]) and a hotel project (Cumulative Project #6 [EA #844]); refer to Exhibit 4-1, *Cumulative Project Locations – City of El Segundo*. Also in 2008, ADS Environmental Services monitored flow in the northerly trunk at Manhole CS-104 (just west of Aviation Boulevard). Since the available flow monitoring data was relatively recent and no appreciable development has subsequently occurred in the tributary area, the data obtained in the two previous studies was used. Additionally, the data was supplemented with one flow monitor placed upstream, near the end of the northerly trunk, at the first manhole west of Nash Street (Manhole CS-095).

As part of the studies conducted for the Raytheon Project, the northerly trunk line was modeled, because of the Applicant's interest in discharging a portion of the Project's wastewater to this line. The model was calibrated using flow monitoring from the 2008 RBF Study and recently gathered supplemental data. The Sewer Area Study *El Segundo Boulevard Sewer Analysis* Section details the methodology and assumptions used in the analysis. Flow monitoring from the northerly trunk at the first manhole downstream of Nash Street (Manhole CS-095) was conducted, as summarized in Table 5.11-4, *Flow Monitoring Data Summary (Aviation Boulevard and Hawaii Street)*.

Table 5.11-4
Flow Monitoring Data Summary
(Northerly Trunk (El Segundo Boulevard) W/O Nash Street (CS-095))

Date	Average Flow (MGD)	Maximum Flow (MGD)	Peaking Factor	Average Flow (cfs)	Maximum Flow (cfs)
03/24/12	0.139	0.521	3.748	0.215	0.806
03/25/12	0.133	0.547	4.113	0.206	0.846
03/26/12	0.281	0.751	2.673	0.435	1.162
03/27/12	0.265	0.806	3.042	0.410	1.247
03/28/12	0.271	0.777	2.867	0.419	1.202
03/29/12	0.274	0.824	3.007	0.424	1.275
03/30/12	0.263	0.763	2.901	0.407	1.181
Average	***0.271***	***0.784***	***2.896***	***0.419***	***1.213***

Source: Psomas, *Sewer Area Study Raytheon Campus Table 1*, March 21, 2013.
Note: Shading denotes highest flow.

As indicated in Table 5.11-4, the highest weekday average flow was 0.281 MGD (0.435 cfs). In order to be conservative, this highest flow was used in the hydraulic model (instead of the average flow of 0.271 MGD), along with a peak flow of 0.824 MGD. This represents the most conservative methodology for calibrating the average and peak sewer system models. This flow at the downstream end of the sewer, along with the flow monitored at Manhole CS-095

described above, were used to calibrate the existing sewer system model for the northerly trunk line. Based on the available data, approximately 0.181 cfs was assumed to enter the wastewater infrastructure at Douglas Street.

The existing peak flow condition was modeled similarly, using the highest measured peak flow of 1.275 cfs from Table 5.11-2 at the upstream end and the 2008 measured peak flow. The results of the existing average and peak flow analysis are shown in the tables included in Appendix 10.9. The highest flow was utilized for the existing flow conditions, which results in a maximum d/D of 54 percent at peak flow.

SOLID WASTE

Table 5.11-5, *Existing Solid Waste Generation*, quantifies the solid waste that is currently generated by the Project site's existing land uses. As shown, the existing land uses generate approximately 7,048 tons per year of solid waste. Solid waste (including recycled materials) in the Project area is handled and transported by Consolidated Disposal, Inc., which is a part of Republic Services.

Table 5.11-5
Existing Solid Waste Generation

Facility Description	Employees	Generation Rate[1] (lbs/day/employee)[2]	Solid Waste (lbs/day)	Solid Waste (tpy)[2]
Office	2,928	10.53	30,832	5,627
Warehouse	88	8.93	786	143
Laboratory	214	8.93	1,911	349
Manufacturing	570	8.93	5,090	929
Total Project	***3,800***		***38,619***	***7,048***

Notes:
1. CalRecycle Website, *Estimated Solid Waste Generation and Disposal Rates*, http://www.calrecycle.ca.gov/wastechar/wastegenrates/, Accessed April 30, 2013.
2. Lbs = pounds per day; tpy = tons per year.

Solid waste from El Segundo that cannot be recycled or diverted is disposed of at landfills. In 2011, El Segundo disposed of approximately 79,686 tons of solid waste, with most being disposed of at the following landfills:[17]

- Azusa Land Reclamation Co. Landfill;
- Chiquita Canyon Sanitary Landfill;
- Otay Landfill;
- Puente Hills Landfill; and
- Sunshine Canyon City/County Landfill.

[17] CalRecycle Website, *Disposal Reporting System - Jurisdiction Disposal and Alternative Daily Cover Tons by Facility*, http://www.calrecycle.ca.gov/LGCentral/Reports/DRS/Destination/JurDspFa.aspx, Accessed April 30, 2013.

DRY UTILITIES

The existing electric, natural gas, and telecommunications facilities are illustrated on Exhibit 5.11-5, *Existing Dry Utilities*.

Electrical Service

The City is located entirely within Southern California Edison's (SCE) service territory. SCE maintains and operates the transmission and distribution infrastructure necessary to provide electricity to end users within El Segundo and throughout its entire service area.

Electrical service to the Project site is provided by an onsite customer dedicated substation and an offsite overhead electrical line. The substation is located at the southwestern portion of the Project site and produces approximately 15 million volt amps (MVA) nominal, 21 MVA maximum.[18] With a current electrical load of 68,240,000 kilowatt hours per year (kWh/yr), the substation is assumed to be at capacity.[19] Electrical service is also provided via a 66 kilovolt (kV) line located within the El Segundo Boulevard right-of-way (ROW).[20] The primary service from this line is stepped down to 12.5 kV double ended system for site distribution. Overhead lines also extend along the site's northern boundary and along the site's western boundary, within an SCE high voltage transmission easement. Additionally, back-up energy supply to the existing uses is provided via Raytheon's power plant, located in the central eastern portion of the site.

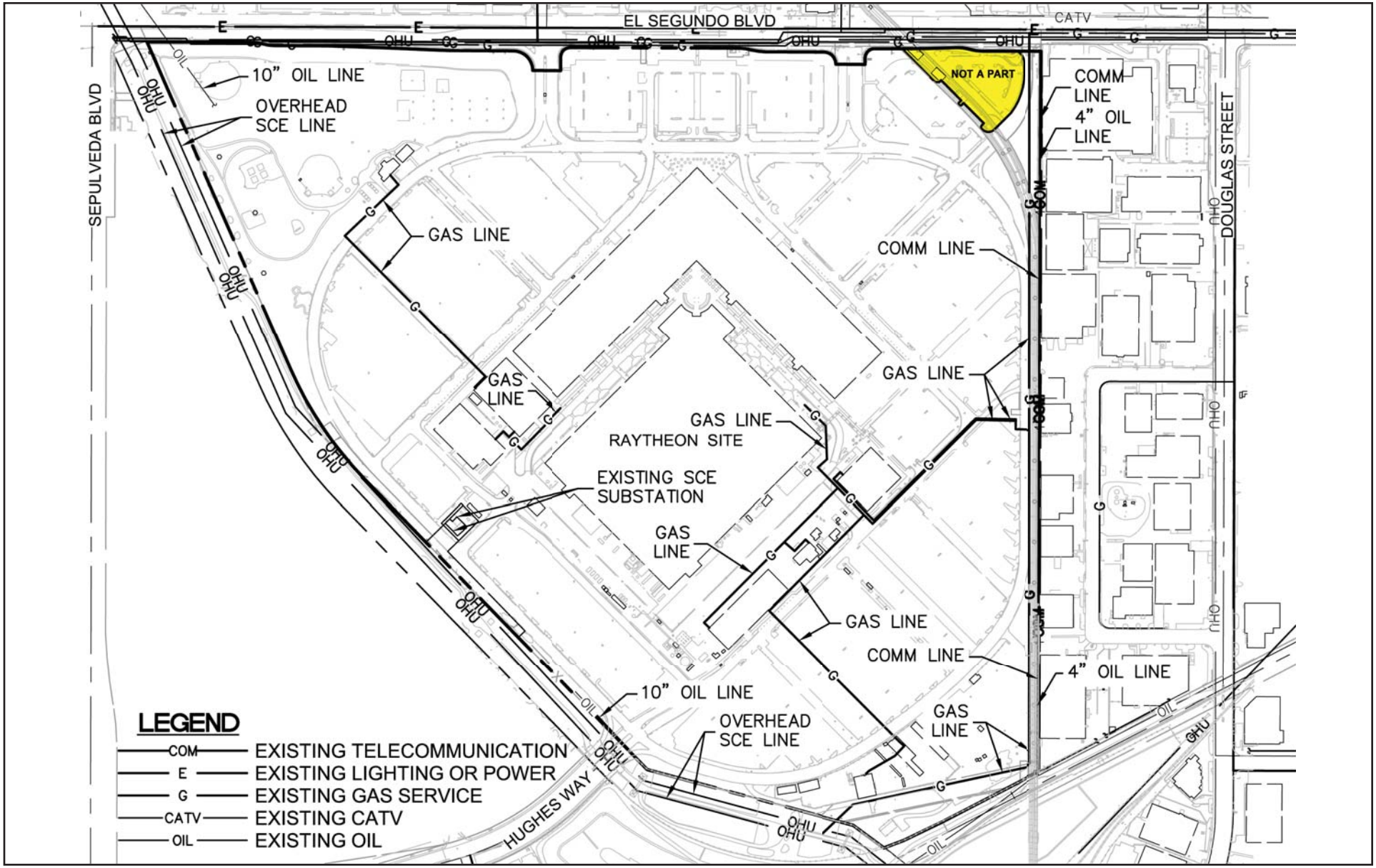
Natural Gas Service

El Segundo is located entirely within Southern California Gas Company's (SCG) service territory. Natural gas service to the Project site is provided via two lines located within El Segundo Boulevard, and one line located along the Project site's eastern boundary/ southeastern corner, within the property line.

Telecommunications

AT&T, Sprint, and Time Warner Cable provide telecommunication services within El Segundo. Telecommunications service to the Project site is provided via one line located along the Project site's eastern boundary, within the property line.

[18] Written Correspondence: Alkire, Masa, Principal Planner, City of El Segundo, August 7, 2013.
[19] Written Correspondence: Alkire, Masa, Principal Planner, City of El Segundo, August 12, 2013.
[20] Written Correspondence: Alkire, Masa, Principal Planner, City of El Segundo, August 7, 2013.



Source: PSOMAS, *Water System Study*, March 21, 2013.

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ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Existing Dry Utilities

Exhibit 5.11-5

5.11.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study, which is contained in Appendix 10.1 of this EIR. The Initial Study includes questions relating to public services and utilities. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, the project would result in a significant environmental impact if one or more of the following occurs:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Require or result in the construction of new wastewater facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Require or result in the construction of wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects (refer to Section 5.11, *Hydrology and Water Quality*);
- Have insufficient water supplies available to serve the project from existing entitlement and resources, and new or expanded entitlement is needed;
- Result in a determination by the wastewater treatment provider, which serves or may serve the project that does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and
- Comply with Federal, State, and local statutes and regulations related to solid waste.

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

Appendix G of the *CEQA Guidelines* does not include a threshold for impacts resulting from dry utilities. For purposes of this analysis, the Project would result in a significant environmental impact if the following occurs:

- Require or result in the construction of new dry utilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

5.11.4 IMPACTS AND MITIGATION MEASURES

WASTEWATER TREATMENT REQUIREMENTS

● **PROJECT IMPLEMENTATION WOULD NOT EXCEED LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD WASTEWATER TREATMENT REQUIREMENTS.**

Impact Analysis: Project implementation would generate approximately 408,167 gpd of wastewater (refer to the *Wastewater Facilities* Section below) which would increase the demand for wastewater treatment. Wastewater originating from the Project would be treated by District No. 5 at its JWPCP. Discharges from the JWPCP are regulated by their current NPDES Permit (NPDES Permit No. CA0053813, Order No. R4-2011-0151). For point source discharges, such as sewer outfalls, each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. The NPDES Permit waste discharge requirements contain components regarding effluent limitations, receiving water limitations, and standard provisions, among others (NPDES Permit Sections IV, V, VI, respectively).

The El Segundo South Campus Specific Plan (ESSCSP) Project involves development of approximately 2.1 million square feet of office, warehouse, light industrial, and retail/restaurant uses, as described in Section 3.0, *Project Description*. ESSCSP Table IV-1, *Allowable Uses*, outlines the land uses permitted in the ESSCSP area, subject to ESMC requirements. Given the nature and scope of these anticipated land uses, Project implementation would not alter the JWPCP's design capacities or cause the plant (i.e., discharger) to violate the effluent limitations, receiving water limitations, or standard provisions. Moreover, as discussed in Section 5.8, *Hydrology and Water Quality*, all future development within the ESSCSP area must comply with NPDES requirements for any commercial and light industrial uses that plan to discharge wastewater to the City's sewage system, which ultimately flows to the JWPCP. Additionally, as concluded in the *Wastewater Treatment* Section below, Project implementation would not require increases in the JWPCP's design capacities. Therefore, Project implementation would not cause the LARWQCB wastewater treatment requirements to be exceeded and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

WATER DEMAND AND FACILITIES

● **PROJECT IMPLEMENTATION COULD REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW WATER FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

Impact Analysis:

Potable Water

Table 5.11-6, *Project Potable Water Demand*, quantifies the proposed potable water use within the Project site based on the ESSCSP's proposed land uses. As shown, the Project's average daily demand is estimated at 408,168 gpd (457.3 AFY).

Table 5.11-6
Project Potable Water Demand

Facility Description	Building Area (Gross sf)	Flow Factor	Units	Average Flow (gpd)
Demolish				
Office	-879	200	gpd/ksf	-176
Warehouse	-18,263	25	gpd/ksf	-457
Subtotal Demolish	*-19,142*			*-632*
Construct				
Office	1,752,800	200	gpd/ksf	350,560
Warehouse	91,840	25	gpd/ksf	2,296
Light Industrial	168,000	200	gpd/ksf	33,600
Commercial	148,960	150	gpd/ksf	22,344
Subtotal Construct	*2,161,600*			*408,800*
Total Project	***2,142,457***			***408,168***
Notes: sf = square feet; gpd = gallons per day; and ksf = 1,000 square feet.				
Source: RBF Consulting, *Water Supply Assessment El Segundo South Campus Specific Plan Table 4,* April 2013.				

As shown in Table 5.11-7, *Proposed Total Potable Water Demand*, the Project site's total water demand at buildout, inclusive of remaining existing uses, would be approximately 804,467 gpd (884.9 AFY).

Table 5.11-7
Proposed Total Potable Water Demand

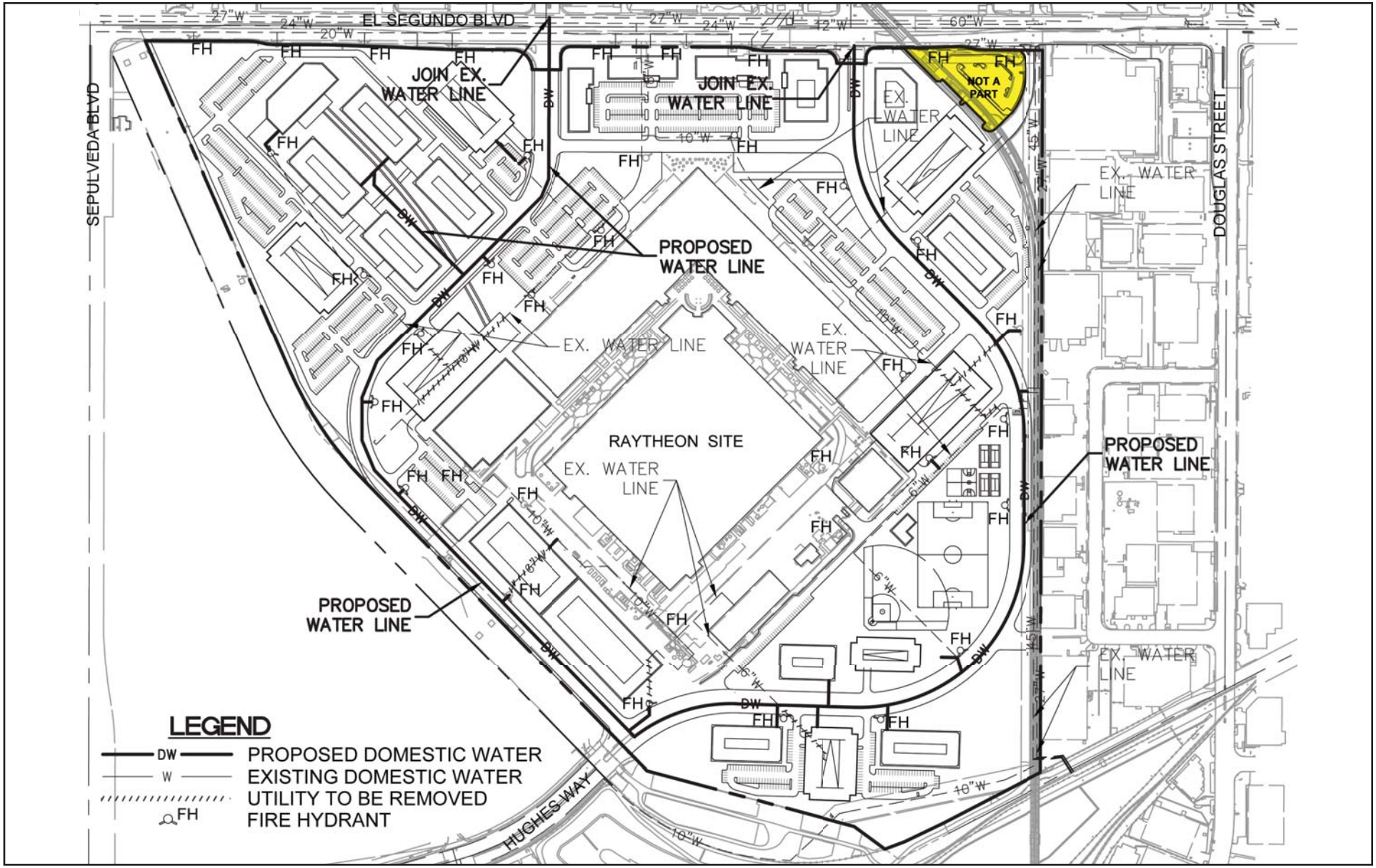
Condition	Average Demand (gpd)	Yearly Demand (AFY)
Existing	396,300	435.9
Proposed	408,168	449.0
Total Demand	*804,467*	*884.9*
Notes: gpd = gallons per day; and AFY = acre-feet per year.		
Source: RBF Consulting, *Water Supply Assessment El Segundo South Campus Specific Plan Table 5,* April 2013.		

The Project's proposed potable water system is illustrated on Exhibit 5.11-6, *Proposed Potable Water System*. As shown, the water system would have three connection points to serve the proposed land uses. In place of the existing single connection point to the north in El Segundo Boulevard, two connection points are proposed to the north in El Segundo Boulevard at the Project driveways (at Continental Boulevard and Nash Street) and one connection to the south. Overall, approximately 6,600 linear feet of water lines would be constructed within the Project boundary. The existing 12-inch connection along the east side of the Project site would be abandoned, since a proposed roadway alignment is expected to interfere with a proposed backflow preventer assembly. Additionally, as discussed below, a new connection point is required to the south to the two existing parallel 10-inch lines at the end of Hughes Way, and a new pipeline is required from Junction 48 to Junction 50.

The proposed potable water system would loop through the site to provide redundancy and a source of fire flow water during maintenance of the system. The system was analyzed by preparing a hydraulic model using H2ONet software. The model includes the proposed onsite water system, City water pipelines in the Project's vicinity, and the City's two imported water turnouts. The model layout and node diagram are illustrated on Exhibit 5.11-7, *Proposed Water System Node Diagram*. Water System Study Section II, *Methodology*, details the methodology and assumptions used in the analysis. The resulting existing flows added to the model equal 10,000 gallons per minute (gpm), which is comparable to peak hour flows reported in the City's Master Plan of 13,000 gpm and maximum day demand flows of 8,000 gpm. The total average daily projected flow for the Project site was included in the water model and equals a flow rate of 560 gpm.

For fire flow requirements, the City defers to LACFD standards. Final fire flows would be based on building size, construction type, and relationship to other structures. In this analysis, fire flow requirements were conservatively assumed equal to 4,000 gpm at 20 psi, based on a 50 percent credit applied for building sprinklers to a maximum of 8,000 gpm fire flow. Water System Study Section II, *Methodology*, details the methodology and assumptions used in the fire flow analysis. From the data collected, the model was used to simulate fire flows of 4,000 gpm plus the Project's estimated maximum-day demand. Based on simulation results, the proposed 12-inch loop through the Project site is concluded to be sufficient. However, as concluded in RBF's Peer Review, although the analysis showed adequate service pressures can be maintained, flow velocities within existing pipelines would be excessive. The City's operating criteria calls for maintaining maximum flow velocities within distribution pipelines, as well as minimum system pressures. The peak-hour simulation shows the existing 20-inch pipeline within El Segundo Boulevard west of the proposed connection points for the Project can sustain velocities of approximately 10 feet per second. City operating criteria calls for daily operating velocities not to exceed 5 feet per second.

As a result of RBF's Peer Review of the Applicant's proposed potable water system, Mitigation Measure USS-1 is recommended, which requires an additional analysis to determine the most feasible method for reducing velocities in the City's existing water system. It is noted that all three proposed connection points should be constructed for initial Project development. With only two connections to the north in El Segundo, the fire flow pressure could result in less than 20 psi at the point farthest from the connections (near Junction 32) after adding the headloss through the backflow devices. The additional analysis for USS-1 could indicate the need to parallel off-site City pipelines or add service connection points for the Project. If a parallel pipeline is feasible, the diameter of the new pipe would be sized during final design. With the added connection at Hughes Way, the modeled fire pressure would increase to 60 psi less the



Source: PSOMAS, *Water System Study*, March 21, 2013.

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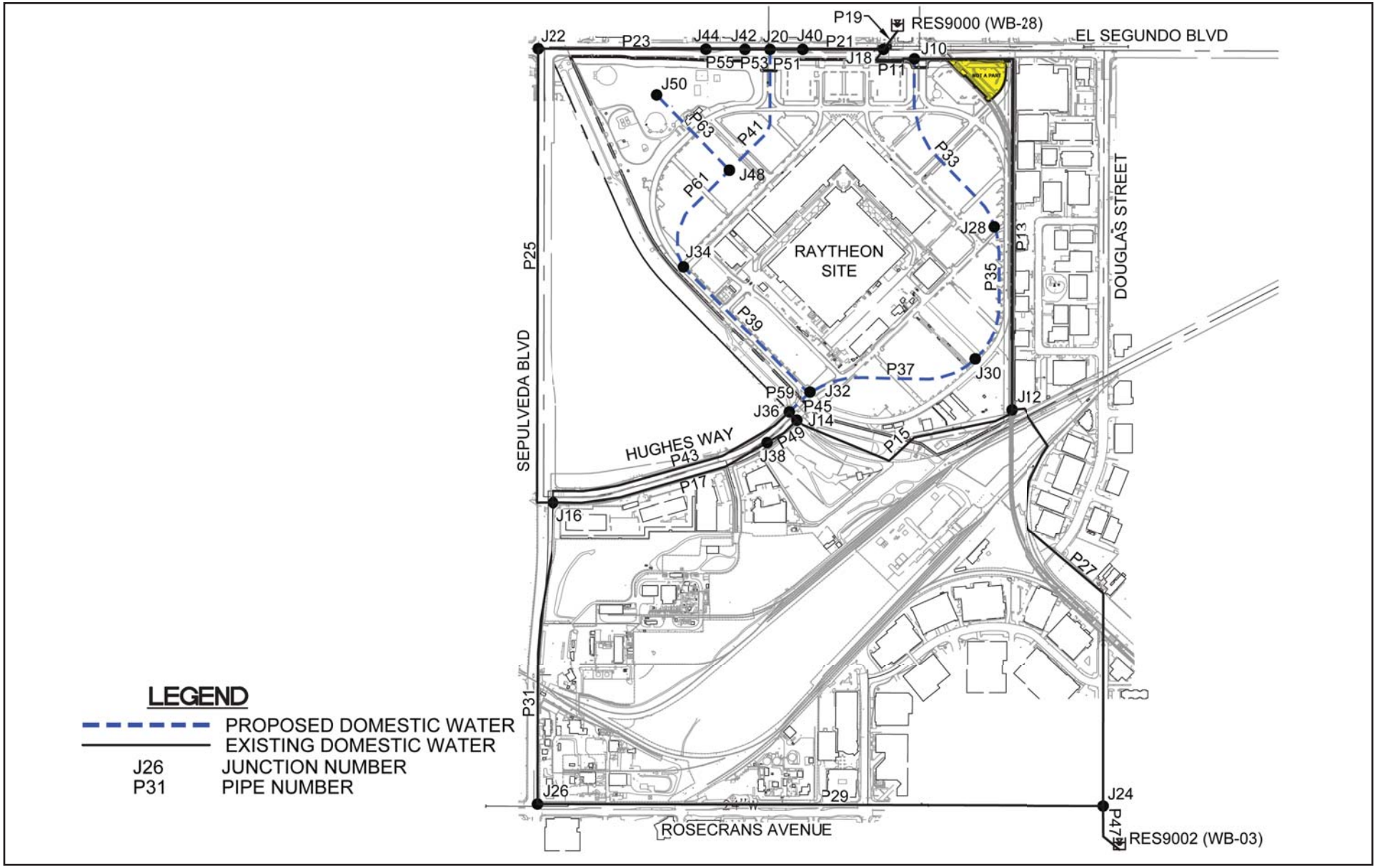
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Proposed Potable Water System

Exhibit 5.11-6



Source: PSOMAS, *Water System Study*, March 21, 2013.

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EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Proposed Water System Node Diagram

Exhibit 5.11-7

headloss through the backflow devices. The model output and node diagram is included in Appendix B of Appendix 10.10.

Peak hour offsite flow conditions were also modeled using the recommended improvements for worst case fire flow conditions. The model output for the peak hour simulation is included in Appendix B of Appendix 10.10. Based on the hydraulic modeling analysis, flow velocities are excessive in the City's offsite transmission system in El Segundo Boulevard. As a result, Mitigation Measure USS-1 is recommended, which requires that regional system analysis be conducted to reduce system velocities during peak system demands.

Recycled Water

Recycled water use for irrigation at the site is proposed to expand to support the proposed Project. As illustrated on Exhibit 5.11-8, *Proposed Reclaimed Water System*, a looped recycled water system is proposed to irrigate existing and new landscaped areas. The Project site would continue to be served by West Basin recycled water main line WB-28 within El Segundo Boulevard. As under existing conditions, the onsite recycled water system would connect to WB-28 via the 6.0-inch City lateral (P19) located near the intersection of El Segundo Boulevard and Continental Boulevard.

The environmental impacts resulting from construction of the water facilities described above are analyzed in Sections 5.1 through Sections 5.11 of this EIR. As concluded in these sections, the water facilities' environmental impacts, which would occur primarily within road ROWs, would be less than significant with mitigation incorporated.

Mitigation Measures:

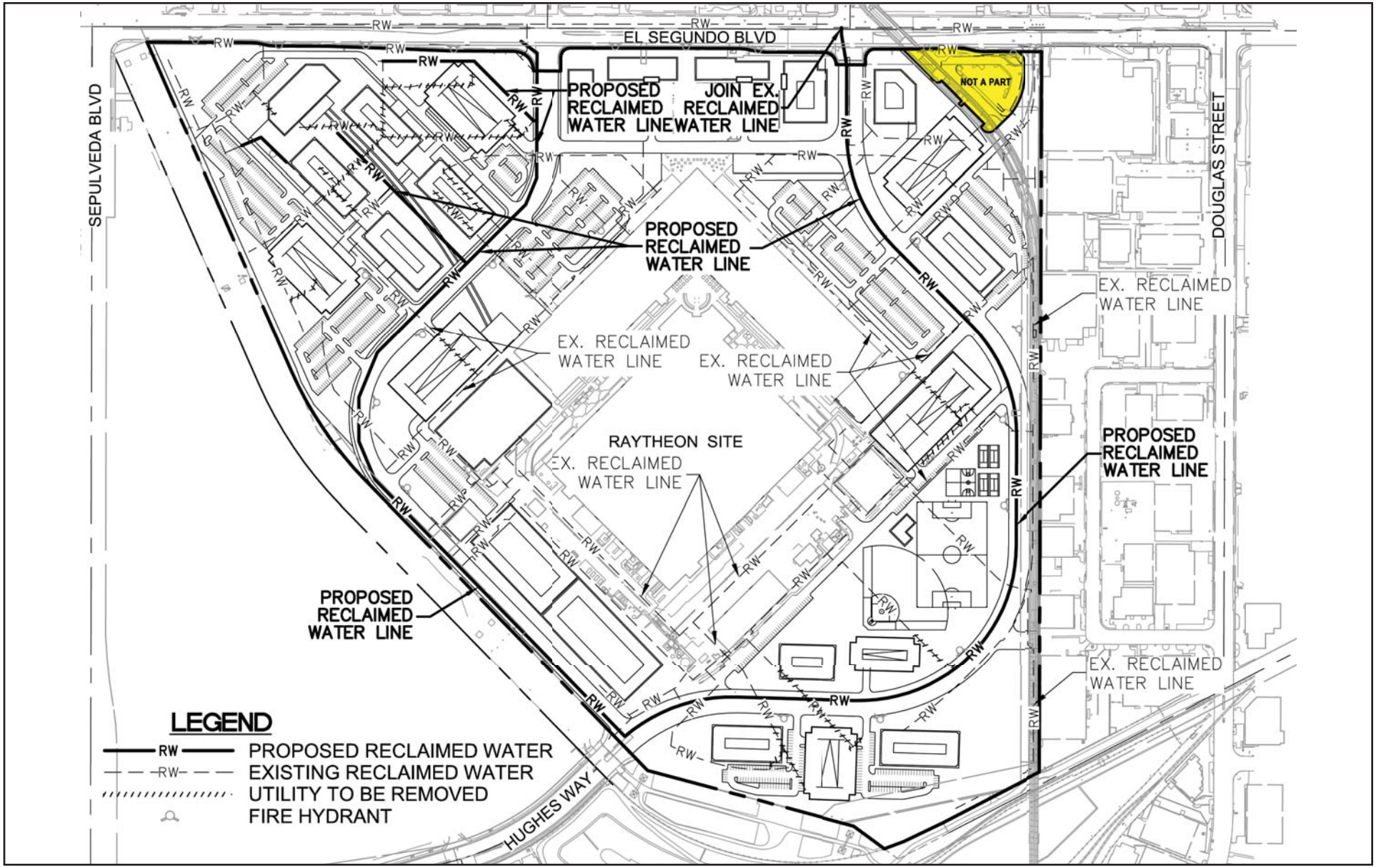
USS-1 Before the City issues a building permit, the Applicant's Engineering Representative must coordinate with the Director of Public Works, or designee, to increase capacity of the City's High Pressure Zone in the vicinity of the Project site. This will include, at a minimum, regional system analysis of the City's Water System using the City's system-wide computer model with the goal of reducing system velocities during peak demands adjacent to the Project site. The Director of Public Works, or designee, will determine the system improvement options that are required.

Level of Significance: Less Than Significant With Mitigation Incorporated.

WASTEWATER FACILITIES

- **PROJECT IMPLEMENTATION COULD REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW WASTEWATER FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

Impact Analysis: The projected wastewater generation from the Project site was estimated based on the proposed ESSCSP land uses and the Districts' flow factors. Table 5.11-8, *Project Wastewater Generation*, quantifies the Project's estimated wastewater generation. As shown, the Project's projected average daily wastewater generation is estimated at 408,168 gpd. Exhibit 5.11-9, *Proposed Sewer System,* illustrates the proposed sewer system.



Source: PSOMAS, *Water System Study*, March 21, 2013.

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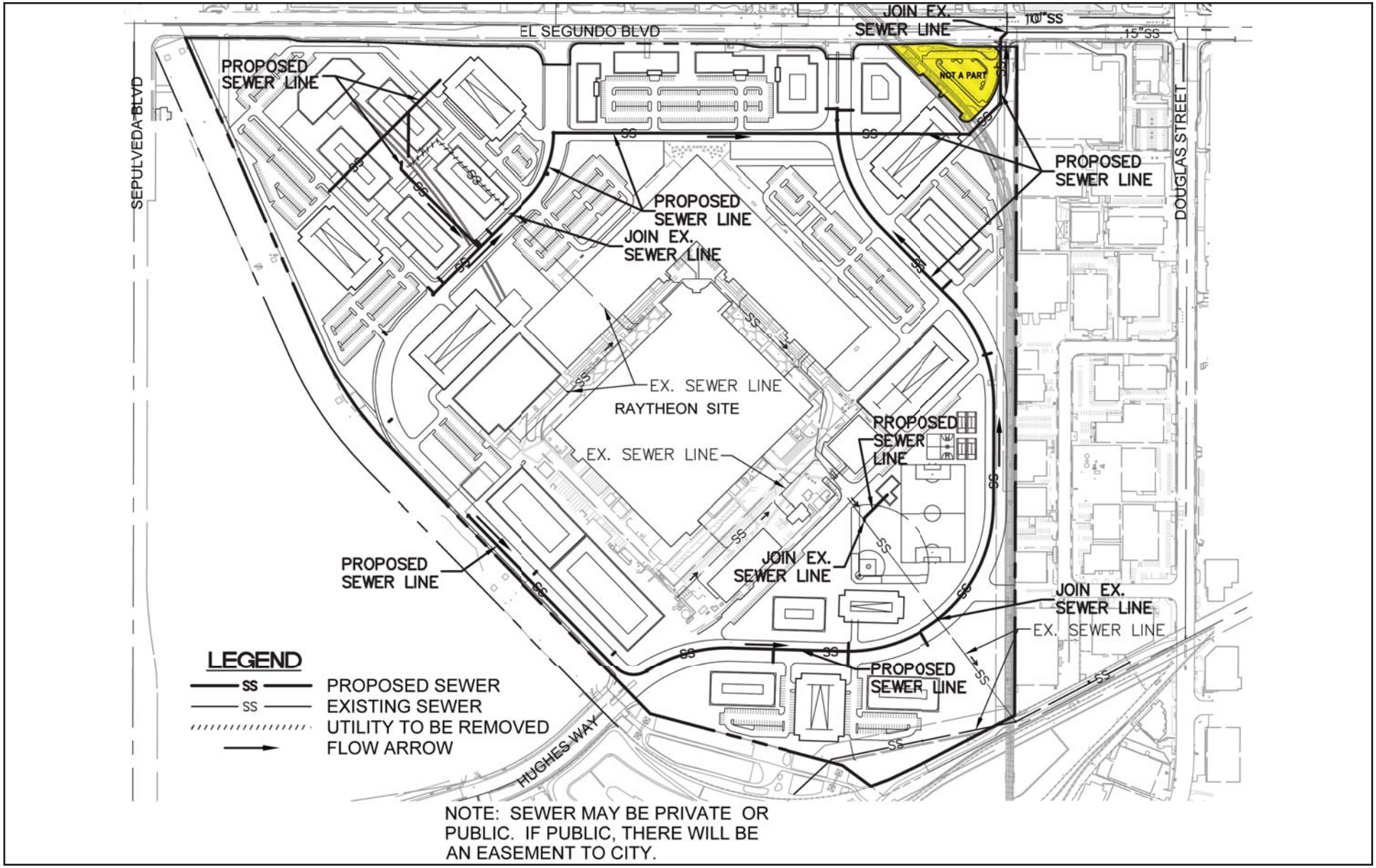
Proposed Reclaimed Water System

Exhibit 5.11-8



Source: PSOMAS, *Water System Study*, March 21, 2013.

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ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Proposed Sewer System

Exhibit 5.11-9

Table 5.11-8
Project Wastewater Generation

Facility Description	Building Area (Gross sf)	Flow Factor	Units	Average Flow (gpd)
DEMOLISH				
Office	-879	200	gpd/ksf	-176
Warehouse	-18,263	25	gpd/ksf	-457
Subtotal Demolish	*-19,142*			*-632*
CONSTRUCT				
Office	1,752,800	200	gpd/ksf	350,560
Warehouse	91,840	25	gpd/ksf	2,296
Light Industrial	168,000	200	gpd/ksf	33,600
Commercial	148,960	150	gpd/ksf	22,344
Subtotal Construct	*2,161,600*			*408,800*
Total Project	***2,142,457***			***408,168***

Notes: sf = square feet; gpd = gallons per day; and ksf = 1,000 square feet.
Source: Psomas, Sewer Area Study Raytheon Campus, March 21, 2013.

Southerly Trunk Analysis

As discussed above, the highest monitored flow was utilized for the existing flow conditions, which results in a maximum d/D of 24 percent at peak flow. For the future flow conditions, the southerly trunk was analyzed using the existing flows plus the proposed Project flows plus the relevant cumulative project (Cumulative Project #5 [EA #768]) flows plus projected flows based on a non-recession vacancy rate. It is noted, the Project's wastewater flow is not anticipated to be as high as that estimated in Table 5.11-5, since the measured flow is at least 40 percent below those assumed values. However, in keeping with the conservative assumptions, the projected average flow of 0.408 MGD (0.631 cfs) that was calculated in that analysis was used. The Sewer Area Study *Southerly Trunk Analysis* Section details the methodology and assumptions used for estimating the Project's future peak flow of 1.401 MGD (2.166 cfs). The combined future flows (including existing) adjusted to reflect current vacancies are a projected increase in average flow of 0.0109 MGD (0.017 cfs) and peak flow of 0.0327 MGD (0.051 cfs). Using these conservative assumptions, the maximum depth of flow to pipe diameter (d/D) under future peak flow conditions (with the Project sewered entirely to the south) is 52 percent, or slightly more than half full in the 21-inch sewer. These estimated future peak flow conditions are below the City's allowable maximum d/D of 70 percent. Sufficient capacity exists to sewer the Project entirely to the southerly trunk. The Project would not require or result in the construction of new wastewater facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. Therefore, Project implementation would result in a less than significant impact in this regard.

Northerly Trunk Analysis

As concluded above, sufficient capacity exists to meet the sewer needs of the Project entirely to the southerly trunk. However, the Applicant has expressed an interest in discharging a portion of the wastewater for the proposed development to the northerly trunk (El Segundo Boulevard). Sewer Area Study Section II, *Methodology/Results*, details the methodology and assumptions

used for estimating the future peak flow of cumulative projects. In order to analyze the future conditions in this sewer and determine the available capacity, the estimated flows from the relevant cumulative projects (Cumulative Project #3 [EA #622], #6 [EA #844], #8 [EA #784], #9 [EA #786], #11 [EA #799], and #19 [EA #940]) were added to the existing flows; refer also to Sewer Area Study Table 4. As indicated in Sewer Area Study Table 4, the combined future flows including existing and cumulative projects were 0.930 cfs for the average and 2.653 cfs for the peak. The future peak flow condition without the Project was run to determine how much capacity would potentially be available for discharging a portion of the wastewater for the Project to the northerly trunk. The maximum d/D was 70.2 percent, which occurs in Pipe 13, from MH ID 99 to MH ID 100, immediately downstream of Douglas Street, which has the flattest slope and is the critical link in the system. The maximum d/D of 70.2 percent is slightly above the City's allowable maximum d/D of 70 percent; therefore, there would be no available capacity to discharge a portion of the wastewater for the proposed development to existing Pipe 13.

To provide additional capacity to the northerly trunk (El Segundo Boulevard), the Sewer Area Study considered the option of upsizing the critical pipe segment. Specifically, the existing 15.0-inch sewer pipeline from Manhole 99 to Manhole 100, which is approximately 235 linear feet, would be replaced with a larger diameter 18-inch sewer pipeline. However, the El Segundo Public Works Department considers this option infeasible.[21] Firstly, the northerly trunk line is connected to a County sewer trunk line that is already at maximum capacity. It is questionable whether the County would allow the City to increase its upstream capacity without contributing to increasing the downstream capacity in the County line, as well. Even if the County were to allow the City to increase capacity in the upstream City line without contributing to increasing capacity in the downstream County line, the overall capacity would not increase. Secondly, numerous underground utilities are present within the El Segundo Boulevard and Aviation Boulevard ROWs, making constructability questionable, notwithstanding the associated costs. Therefore, the City has identified an alternative option to provide additional capacity to the northerly trunk. Specifically, this option involves installing a relief sewer within Douglas Street to connect to the trunk line at Coral Circle and Douglas Street and divert a portion of the sewer flow from the northerly trunk. This optional relief sewer would create additional capacity within the northerly trunk line to accept sewer flow from the proposed development.

In the event the City permits the Applicant to sewer a portion of the proposed development to the northerly trunk, compliance with Mitigation Measure USS-2 would be required. Specifically, Mitigation Measure USS-2 requires that an adequately sized relief sewer be installed within Douglas Street that connects with the trunk line at Coral Circle and Douglas Street and diverts sufficient sewer flow from the northerly trunk (El Segundo Boulevard) to provide adequate capacity to be determined by the Director of Public Works.

The environmental impacts resulting from construction of the sewer facilities described above are analyzed in Sections 5.1 through Sections 5.11 of this EIR. As concluded in these sections, the sewer facilities' environmental impacts, which would occur primarily within road ROWs, would be less than significant with mitigation incorporated.

[21] Written Correspondence: Alkire, Masa, Principal Planner, City of El Segundo, August 20, 2013.

Mitigation Measures:

USS-2 Before the City issues a building permit for a building connecting to the northerly sewer trunk line in El Segundo Boulevard, the Director of Public Works, or designee, will determine the required capacity in the northerly sewer trunk line in El Segundo Boulevard. This will include, at a minimum, regional system analysis using the City's sewer master plan computer model. In the event the City approves discharging a portion of the proposed ESSCSP wastewater for the development to the northerly trunk, before the City issues a building permit, an adequately sized relief line, as determined by the Director of Public Works, or designee, must be installed within Douglas Street that connects with the trunk line at Coral Circle and Douglas Street and diverts flow equal to or greater than the additional capacity that is required in the northerly trunk for the proposed development. The sizing and other specifications of the relief sewer are subject to approval by the Director of Public Works.

Level of Significance: Less Than Significant With Mitigation Incorporated.

WATER SUPPLIES

- **THERE WOULD NOT BE INSUFFICIENT WATER SUPPLIES AVAILABLE TO SERVE THE PROJECT FROM EXISTING ENTITLEMENT AND RESOURCES, AND NEW OR EXPANDED ENTITLEMENT COULD BE NEEDED.**

Impact Analysis: In compliance with SB 610 and SB 221,[22] a WSA was drafted to verify that sufficient water supply is available to the water provider during normal, single dry, and multiple dry years within a 20-year projection that will meet the Project's projected demand, in addition to existing and planned future uses. The WSA uses the information presented in the El Segundo UWMP that examines existing water supply entitlements, water rights, and water service contracts relevant to the water supply for the Project, as well as water received in prior years pursuant to those entitlements and any proposed additional water supplies planned by the City.

As discussed above, the Project is estimated to result in a net increase in potable water demand by 408,168 gpd (457.3 AFY). The combined data presented in the El Segundo UWMP and West Basin UWMP demonstrate water supply planning to meet the increased demands due to the Project, as well as future development and redevelopment projects, within the City's service area during normal, single-dry, and multiple-dry year water supply scenarios through Year 2035.

Although projected water production needs for the City show a slight decline from current levels, the projected increased number of service accounts anticipated by the UWMP demonstrate that the water supply capacity needed for the Project was considered for both the UWMPs of the City and West Basin, its wholesale water agency. The City makes this determination based on the information provided in the WSA and the following specific facts:

- The Project's estimated water demands are 457.3 AFY; West Basin accounts for a total increase of 1,830 AFY for El Segundo; therefore, the Project represents approximately 25 percent of the projected increase within the City for the 2010 UWMP planning horizon.

[22] Water Code §§ 10910–10915.

- The City's projected non-residential water accounts will increase by 125 of the total estimated increase of 631 accounts as projected in the El Segundo UWMP, which represents approximately 20 percent of the projected increase within the City for the 2010 UWMP planning horizon.

- The normal, single dry-year and multiple dry-year water supply/demand scenarios analyzed pursuant to the requirements of SB 610 and the UWMP Act will result in sufficient water supply for the anticipated City demands through Year 2035, including the Project, as well as other concurrent planned projects within the City.

- The City has established water conservation and demand management measures, in concert with the West Basin regional compliance plan, which will reduce per-capita water usage to meet its water use reduction goals.

- Through membership in West Basin, the City receives imported potable water supplies from MWDSC whose primary source of supply is the State Water Project (DWR). Both DWR and MWDSC have prepared extensive studies analyzing future water supply scenarios under various conditions, including climate change, and communicated the reliability of their water supplies to their wholesale agencies, including West Basin.

Therefore, there would be sufficient water supplies available to serve the Project from existing entitlement and resources, and no new or expanded entitlement would be needed. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

WASTEWATER TREATMENT

- **PROJECT IMPLEMENTATION WOULD NOT REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW WASTEWATER TREATMENT FACILITIES OR EXPANSION OF EXISTING FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

- **THE WASTEWATER TREATMENT PROVIDER, WHICH WOULD SERVE THE PROJECT, WOULD DETERMINE THAT IT HAS ADEQUATE CAPACITY TO SERVE THE PROJECT'S PROJECTED DEMAND IN ADDITION TO THE PROVIDER'S EXISTING COMMITMENTS.**

Impact Analysis: The JWPCP is currently operating at approximately 66 percent capacity, based on a design capacity of 400 MGD and the current treatment of approximately 265.4 MGD. Therefore, approximately 134.6 MGD of available capacity exists at the JWPCP.

Although, the Project could potentially cause SCAG's 2022 household and population forecasts for the City to be exceeded by approximately three percent (approximately 763 persons), the maximum population growth attributed to the Project is considered unlikely. As concluded in Section 6.3, *Growth-Inducing Impacts*, the Project's potential population growth is considered

less than significant in a regional context. Additionally, Project implementation would not cause SCAG's 2022 employment forecast for the City to be exceeded; refer to Section 6.3. The forecast employment growth attributed to the Project would not conflict with SCAG's employment forecast for the City. Additionally, the wastewater generated by the Project (approximately 408,167 gpd) would not exceed the available capacity at the JWPCP (approximately 134.6 MGD). Therefore, adequate capacity exists to serve the Project's projected demand and Project implementation would not require increases in the JWPCP's design capacities. Project implementation would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects. A less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

SOLID WASTE

- **THE PROJECT WOULD NOT BE SERVED BY A LANDFILL WITH INSUFFICIENT PERMITTED CAPACITY TO ACCOMMODATE THE PROJECT'S SOLID WASTE DISPOSAL NEEDS.**

- **THE PROJECT WOULD NOT CONFLICT WITH FEDERAL, STATE, OR LOCAL STATUTES AND REGULATIONS RELATED TO SOLID WASTE.**

Impact Analysis: Table 5.11-9, *Project Solid Waste Generation*, quantifies the Project's estimated solid waste generation. As shown, the Project's estimated solid waste generation is 8,761 tons per year. Consolidated Disposal Inc. currently provides solid waste collection services to the Project area and would be able to serve the Project site.

Table 5.11-9
Project Solid Waste Generation

Facility Description	Employees[1]	Generation Rate[2] (lbs/day/employee)[3]	Generation (lbs/day)	Generation (tpy)[3]
Office	3,984	10.53	41,952	7,656
Warehouse	61	8.93	545	99
Light Industrial	203	8.93	1,813	331
Commercial	351	10.53	3,696	675
Total Project	***4,598***		***48,005***	***8,761***

Notes:
1. Refer to in Table 5.9-8, *Project Employment Forecast*.
2. CalRecycle Website, *Estimated Solid Waste Generation and Disposal Rates*, http://www.calrecycle.ca.gov/wastechar/wastegenrates/, Accessed April 30, 2013.
3. Lbs = Pounds per day; tpy = tons per year.

Table 5.11-10, *Landfill Capacities*, shows the maximum daily permitted throughput and anticipated closure dates for the landfills that receive solid waste from El Segundo.

Table 5.11-10
Landfill Capacities

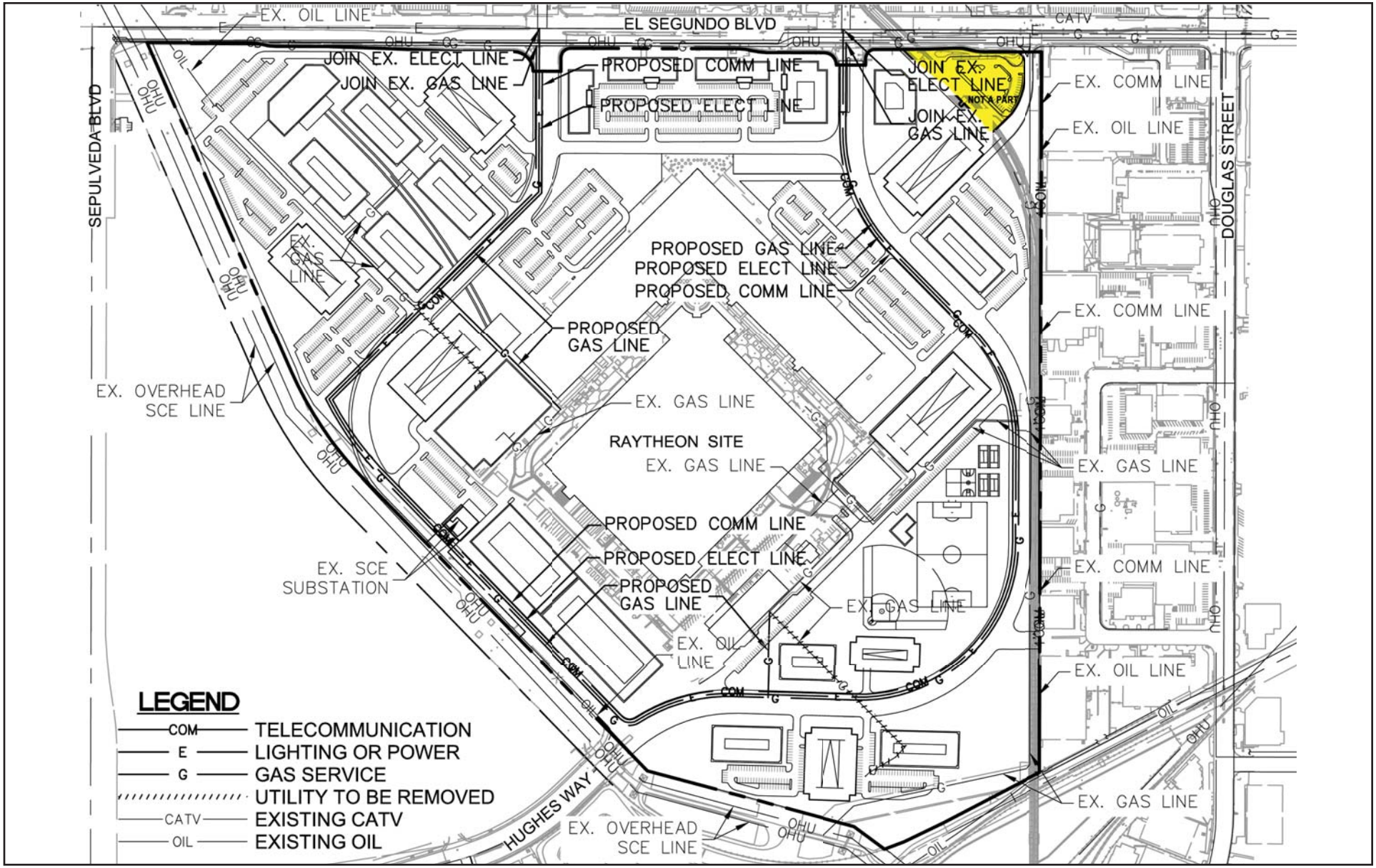
Facility	Maximum Daily Permitted Throughput (tons/day)	Anticipated Closure Date
Azusa Land Reclamation Company Landfill	6,500	1/1/2025
Chiquita Canyon Sanitary Landfill	6,000	11/24/2019
CWMI, KHF (MSW Landfill B-19)	2,000	N/A
El Sobrante Landfill	16,054	1/1/2045
Lancaster Landfill and Recycling Center	5,100	3/1/2044
Mid-Valley Sanitary Landfill	7,500	4/1/2033
Olinda Alpha Sanitary Landfill	8,000	12/31/2021
Otay Landfill	5,830	2/28/2028
Prima Desecha Sanitary Landfill	4,000	12/31/2067
Simi Valley Landfill and Recycling Center	9,250	1/31/2052
Sunshine Canyon City/County Landfill	12,100	12/31/2037

Source: CalRecycle Website, Facility Site Summary Details, http://www.calrecycle.ca.gov/SWFacilities/Directory/19-AA-0013/Detail/, Accessed March 7, 2013.

Based on daily throughput volumes and anticipated closure dates shown above, the Project would be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs. Further, the Project would be required to comply with the City's SRRE for diverting solid waste. Some of the source reduction programs that would be available to the commercial uses are: Commercial On-Site Greenwaste Pick-Up; Electronic Waste; Commercial On-site Pick-Up; and Business Waste Reduction Program. Compliance with the SRRE would reduce the volume of solid waste ultimately disposed of at a landfill. Additionally, compliance with the SRRE would be in furtherance of meeting the City's disposal rate targets and exceeding AB 939's 50 percent diversion requirement. Continued compliance with the SRRE would ensure that the Project would comply with the statutes and regulations related to solid waste. Therefore, the Project would not conflict with federal, state, or local statutes and regulations related to solid waste, and a less than significant impact would occur in this regard.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.



Source: PSOMAS, *Water System Study*, March 21, 2013.

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ENVIRONMENTAL IMPACT REPORT
EL SEGUNDO SOUTH CAMPUS SPECIFIC PLAN (EA 905)

Proposed Dry Utilities

Exhibit 5.11-10

DRY UTILITIES

- **PROJECT IMPLEMENTATION COULD REQUIRE OR RESULT IN THE CONSTRUCTION OF NEW DRY UTILITIES OR EXPANSION OF EXISTING UTILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS.**

Impact Analysis: The proposed dry utilities are illustrated on Exhibit 5.11-10, *Proposed Dry Utilities*. As illustrated on Exhibit 5.11-10, the proposed dry utilities would loop through the site, within the proposed the Hughes Way/Nash Street and Continental Boulevard extensions.

Electrical Service

Table 5.11-11, *Project Electrical Demand*, quantifies the Project's electrical demand. As shown, the Project's estimated electrical demand is approximately 25.4 million kilowatt hours (approximately 25,457 megawatt hours) per year. However, the Project would be subject to compliance with the energy conservation standards set forth in California Code of Regulations Title 24, Part 6, Article 2. Therefore, through compliance with Title 24 requirements, the Project's actual electrical demand is anticipated to be less than estimated in Table 5.11-11.

Table 5.11-11
Project Electrical Demand

Land Use	Square Feet	Demand Rate[1] (KWh/sf/year)[2]	Demand (KWh/year)
Office	-879	12.95	-11,383
Warehouse	-18,263	4.35	-79,444
Office	1,752,800	12.95	22,698,760
Warehouse	91,840	4.35	399,504
Light Industrial[3]	168,000	4.35	730,800
Commercial[4]	148,960	13.55	2,018,408
Total	**2,142,457**		**25,456,645**

Notes:
1. South Coast Air Quality Management District, *CEQA Air Quality Handbook Table A9-11-A*, April 1993.
2. kWh = kilowatt-hour; and sf = square feet.
3. Based on Table A9-11-A's "Warehouse" demand rate.
4. Based on Table A9-11-A's "Retail" demand rate.

SCE maintains and operates the transmission and distribution infrastructure located in the Project area. According to SCE, it anticipates being able to provide electrical service to the Project site, sufficient to meet the electrical demands of the proposed uses. Electrical service to the Project would be provided via the existing customer dedicated substation located in the southwestern portion of the site and 66 kV power line located within the El Segundo Boulevard ROW (south side). Extension of this existing power distribution system, along with a proposed second customer dedicated substation (of between 50 and 200 kV)[23] would be required to provide electrical service to the proposed development. The utility corridor adjacent and

[23] Written Correspondence: Alkire, Masa, City of El Segundo Principal Planner, December 5, 2014.

southwest of the Project site would not be used to provide electrical service to or impacted by the Project. The Project does not include modification of the power lines in the utility corridor adjacent and southwest of the Project site.

The Project proposes dedication and construction of roadway for an approximately 10 to 22-foot wide (depending upon the location) portion of Project frontage along El Segundo Boulevard, in order to widen the ROW; see ESSCSP Exhibit 13. Therefore, the Project would require relocation of the existing power line along the south side of El Segundo Boulevard. As illustrated on Exhibit 5.11-10, the site's electrical system is proposed to have two connection points to this power line to serve the Project: one connection point to the north in El Segundo Boulevard at the Nash Street Project driveway; and one connection point to the proposed substation. Additionally, as discussed in Section 5.2, Mitigation Measures (TRA-1 through TRA-6, TRA-8, and TRA-9) would widen the approaches of various intersections (Nash Street/Maple Avenue, Nash Street/El Segundo Boulevard, Aviation Boulevard/Marine Avenue, and Sepulveda Boulevard/Mariposa Avenue), where there are power lines. The Project would require relocation of the existing power lines at these intersections. The new substation would be located immediately northwest of the existing substation and would be sized to meet the demands of the proposed development, with an anticipated electrical load of approximately 68,240 kWh/yr.

As part of the Project's approval process, all plans involving the widening of El Segundo Boulevard and intersection improvements would be submitted to SCE for its review and approval before final City approval of ROW improvements to El Segundo Boulevard. The Project Applicant and SCE, in consultation with City Department of Public Works and Department of Planning and Building Safety staff, would review the Project plans and determine the appropriate methods for SCE facility construction and relocation. Further, the environmental impacts resulting from construction of the electrical facilities are analyzed in Sections 5.1 through Sections 5.11 of this EIR. There would be no significant unavoidable environmental impacts caused by construction of the substation or relocation of the power lines.

The financial responsibility for upgrades or additional facilities, if necessary, must comply with the CPUC's rules and tariffs. The Applicant would be required to pay the applicable fees assessed by SCE to construct the substation and relocate the power lines to serve the proposed uses. SCE would not provide service to new developments if there were not adequate electricity supplies and infrastructure to maintain existing service levels and meet the anticipated electricity demands of the specific development requesting service. Before the City issues any grading permit, the Applicant would be required to coordinate with SCE to determine the exact location of the electrical facilities. Therefore, the Project would not have a significant impact on SCE's capacity to provide electrical power services to the service area.

General Order No. 131-D (Order 131-D) was adopted by the California Public Utilities Commission (CPUC) to be responsive to CEQA requirements, among other objectives. According to Order 131-D, no electric public utility is allowed to begin construction on power line facilities or substations, which are designed for immediate or eventual operation at any voltage between 50 kV and 200 kV, without the CPUC having first issued a Permit to Construct, in accordance with the provisions of Sections IX.B, X, and XI.B (see Order 131-D Section III.B). As described above, the Project proposes construction of a customer dedicated substation (between 50 and 200 kV) and to relocate 66 kV power lines. According to Order 131-D Section III.B.1.c, the new substation and relocated power lines would be exempt from Section IX.B (which requires filing a Permit to Construct), given they satisfy the following criteria for exemption:

- *Power lines or substations to be relocated or constructed which have undergone environmental review pursuant to CEQA as part of a larger project, and for which the final CEQA document finds no significant unavoidable environmental impacts caused by the proposed line or substation.*

According to Order 131-D Section X.A, the new substation and relocated power lines would be exempt from Section X.A (which addresses electric and magnetic fields (EMFs)), given an application for Permit to Construct would not be required. According to Order 131-D Section XI.B, the new substation and relocated power lines would be subject to compliance with Section XI.B, which requires that SCE give notice of the construction of power line facilities or substations between 50 kV and 200 kV deemed exempt from Section III (see discussion above).

Natural Gas Service

Table 5.11-12, *Project Natural Gas Demand*, quantifies the Project's natural gas demand. As shown, the Project's estimated natural gas demand is approximately 3,909 million cubic feet per year.

Table 5.11-12
Project Natural Gas Demand

Land Use	Square Feet	Demand Rate[1] (cf/sf/month)[2]	Demand (cf/month)	Demand (million cf/year)
Office	-879	2.00	-147,410	-1.77
Warehouse	-18,263	2.90	-345,582	-4.15
Office	1,752,800	2.00	293,948,942	3,527.39
Warehouse[3]	91,840	2.90	1,737,842	20.85
Light Industrial[3]	168,000	2.90	3,178,980	38.15
Commercial	148,960	2.90	27,349,428	328.19
Total	**2,142,457**		**325,722,201**	**3,909**

Notes:
1. South Coast Air Quality Management District, *CEQA Air Quality Handbook Table A9-12-A*, April 1993.
2. cf/sf/month = cubic feet per square foot per month.
3. Based on Table A9-12-A's "Commercial" demand rate.

However, the Project would be subject to compliance with the energy conservation standards set forth in California Code of Regulations Title 24, Part 6, Article 2. Therefore, through compliance with Title 24 requirements, the Project's actual natural gas demand is anticipated to be less than estimated in Table 5.11-12.

Southern California Gas Company (SCG) declares itself a "reactive" utility and would provide natural gas as customers request its services. SCG has also indicated that an adequate supply of natural gas is currently available to serve additional development, and that the natural gas level of service provided to the area would not be impaired by Project implementation.

The Project would be subject to compliance with the energy conservation standards set forth in California Code of Regulations Title 24, Part 6, Article 2. Therefore, through compliance with Title 24 requirements, the Project's actual natural gas demand is anticipated to be less than estimated in Table 5.11-11. An adequate supply is anticipated to be available, as the gas supplies and infrastructure to support demand are provided as needed by SCG. SCG would not

provide service to new developments if there were not adequate natural gas supplies and infrastructure to maintain existing service levels and meet the anticipated natural gas demands of the specific development requesting service. Therefore the Project would not substantially increase demands beyond the available supply.

Natural gas service to the Project would be provided via two lines located within El Segundo Boulevard, and one line located along the Project site's eastern boundary/southeastern corner, within the property line. As illustrated on Exhibit 5.11-10, the site's natural gas system is proposed to have two connection points to serve the Project, which would be to the north in El Segundo Boulevard at the Project driveways, at Continental Boulevard and Nash Street.

Telecommunications

Telecommunications service to the Project is proposed via the existing line located along the Project site's eastern boundary, within the property line. As illustrated on Exhibit 5.11-10, there would be one connection point to serve the Project, approximately mid-way along the eastern property line.

The environmental impacts resulting from construction of the dry utilities described above are analyzed in Sections 5.1 through Sections 5.11 of this EIR. As concluded in these sections, the dry utilities' environmental impacts, which would occur primarily within road ROWs, would be less than significant with mitigation incorporated.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

5.11.5 CUMULATIVE IMPACTS

- **THE PROJECT, COMBINED WITH CUMULATIVE DEVELOPMENT, COULD CREATE INCREASED DEMAND FOR UTILITIES AND SERVICE SYSTEMS THAT COULD CAUSE SIGNIFICANT IMPACTS.**

***Impact Analysis*:** For purposes of water system impact analysis, cumulative impacts are considered for cumulative projects which involve water facilities also utilized by the Project. The cumulative projects involve new developments, which would result in increased demands on the local water system. As concluded above, the Project would similarly place greater demands on the system. Therefore, the Project's incremental effects to the water system are cumulatively considerable. The Water System Study analyzed the Project's impacts upon capacity, pressures, and fire flows in the water system serving the site and surrounding area. The analysis concluded water facility improvements were necessary to ensure that the Project combined with cumulative development would be adequately served. The Project would have a less than significant impact to water facilities with mitigation incorporated. Additionally, each cumulative project would be required to submit individual analysis of their potential impacts upon the water system and demonstrate how the project satisfies minimum standards. Therefore, the combined cumulative impacts to the water system associated with the Project's incremental effects and those of the cumulative projects would be less than significant. For purposes of sewer system impact analyses, cumulative impacts are considered for the following

cumulative projects with wastewater flows that would combine with the Project's (refer also to Sewer Area Study Table 4):

- #3 (EA #622);
- #6 (EA #844);
- #8 (EA #784);
- #9 (EA #786);
- #11 (EA #799); and
- #19 (EA #940).

The cumulative projects involve new developments, which would result in increased demands on the local sewer system. As concluded above, the Project would similarly place greater demands on the system. Therefore, the Project's incremental effects to the sewer system are cumulatively considerable. The Sewer Area Study analyzed the Project's impacts upon capacity in the sewer system serving the site and surrounding area. The analysis concluded the Project could be entirely served by discharging sewage to the south and no sewer facility improvements would be necessary to ensure that the Project combined with cumulative development would be adequately served. The Project would have a less than significant impact to sewer facilities with mitigation incorporated. Additionally, each cumulative project would be required to submit individual analysis of their potential impacts upon the sewer system and demonstrate how the project satisfies minimum standards. Therefore, the combined cumulative impacts to the sewer system associated with the Project's incremental effects and those of the cumulative projects would be less than significant.

For purposes of the WSA, cumulative impacts are considered for cumulative projects located within the service areas addressed in the El Segundo UWMP and West Basin UWMP. The cumulative projects involve new developments, which would result in increased water demands. As concluded above, the Project is estimated to result in a net increase in water demand of 408,168 gpd. Therefore, the Project's incremental effects to water supplies are cumulatively considerable. The WSA considered the Project's water demands, along with existing and cumulative developments. The WSA concluded sufficient water supply is available to the water provider during normal, single dry, and multiple dry years within a 20-year projection that would meet the Project's demands, in addition to existing and planned future uses. The Project would have a less than significant impact to water supplies. Therefore, the combined cumulative impacts to water supplies associated with the Project's incremental effects and those of the cumulative projects would be less than significant.

For purposes of wastewater treatment, cumulative impacts are considered for cumulative projects, which would generate wastewater that would be treated at the JWPCP. As previously noted, the available JWPCP capacity is limited to levels associated with the adopted SCAG growth forecasts. The cumulative projects involve new developments, which would result in increased demands on wastewater treatment at the JWPCP. As concluded above, the Project would similarly place greater demands on the JWPCP. Therefore, the Project's incremental effects to the JWPCP capacity, which is currently at 66 percent,[24] are cumulatively considerable. Although the Project could potentially cause SCAG's 2022 population forecasts for the City to be exceeded (approximately 3.0 percent or 763 persons), the population growth attributed to the Project and cumulative development is considered unlikely. Given the unemployment that exists in El Segundo and surrounding areas, it is anticipated that the new positions created by the Project and cumulative development would be filled by persons who already reside in the area and generate a demand for wastewater treatment. Therefore, the combined cumulative

[24] Written Correspondence: Raza, Adriana, Customer Service Specialist, County Sanitation Districts of Los Angeles County, November 28, 2012.

impacts to the JWPCP capacity associated with the Project's incremental effects and those of the cumulative projects would be less than significant.

For purposes of solid waste analysis, cumulative impacts are considered for cumulative projects, which dispose of their wastes at the landfills also utilized by the Project. The cumulative projects involve new developments, which would increase solid waste generation, impacting capacities of the landfills receiving their wastes. As concluded above, the Project would similarly increase solid waste generation and impact capacities at landfills. Therefore, the Project's incremental effects to landfill capacities are cumulatively considerable. However, compliance with the El Segundo and respective cities SRREs would reduce the volume of solid waste ultimately disposed of at a landfill. Additionally, compliance with the SRRE would be in furtherance of meeting each jurisdiction's disposal rate targets and exceeding AB 939's 50 percent diversion requirement. Therefore, the combined cumulative impacts to landfill capacities associated with the Project's incremental effects and those of the cumulative projects would be less than significant.

For purposes of dry utilities analyses, cumulative impacts are considered for cumulative projects, which are located in the SCE, SCG, and the AT&T/Sprint/Time Warner Cable telecommunication service areas. As concluded above, the dry utilities would not provide service to the Project (or any new development), if there were not adequate supplies and infrastructure to maintain existing service levels and meet the anticipated demands of the specific development requesting service. The Project would be subject to compliance with the Title 24 energy conservation standards. Additionally, the Project proposes a new onsite substation to meet Project demands. Therefore, the Project's incremental effects to dry utilities are not cumulatively considerable.

Mitigation Measures: No mitigation is required.

Level of Significance: Less Than Significant Impact.

5.11.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to utilities and service systems have been identified following expansion of the ESSCSP.

5.11.7 SOURCES CITED

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