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Water Supply Technical Memorandum

TECHNICAL MEMORANDUM

To: Ashley Rogers, Eyestone Environmental
From: Mike Swan
Date: March 31, 2017
Subject: 2nd & PCH Project



The purpose of this memorandum is to document the water demand estimates for the proposed development project at 2nd and Pacific Coast Highway in Long Beach.

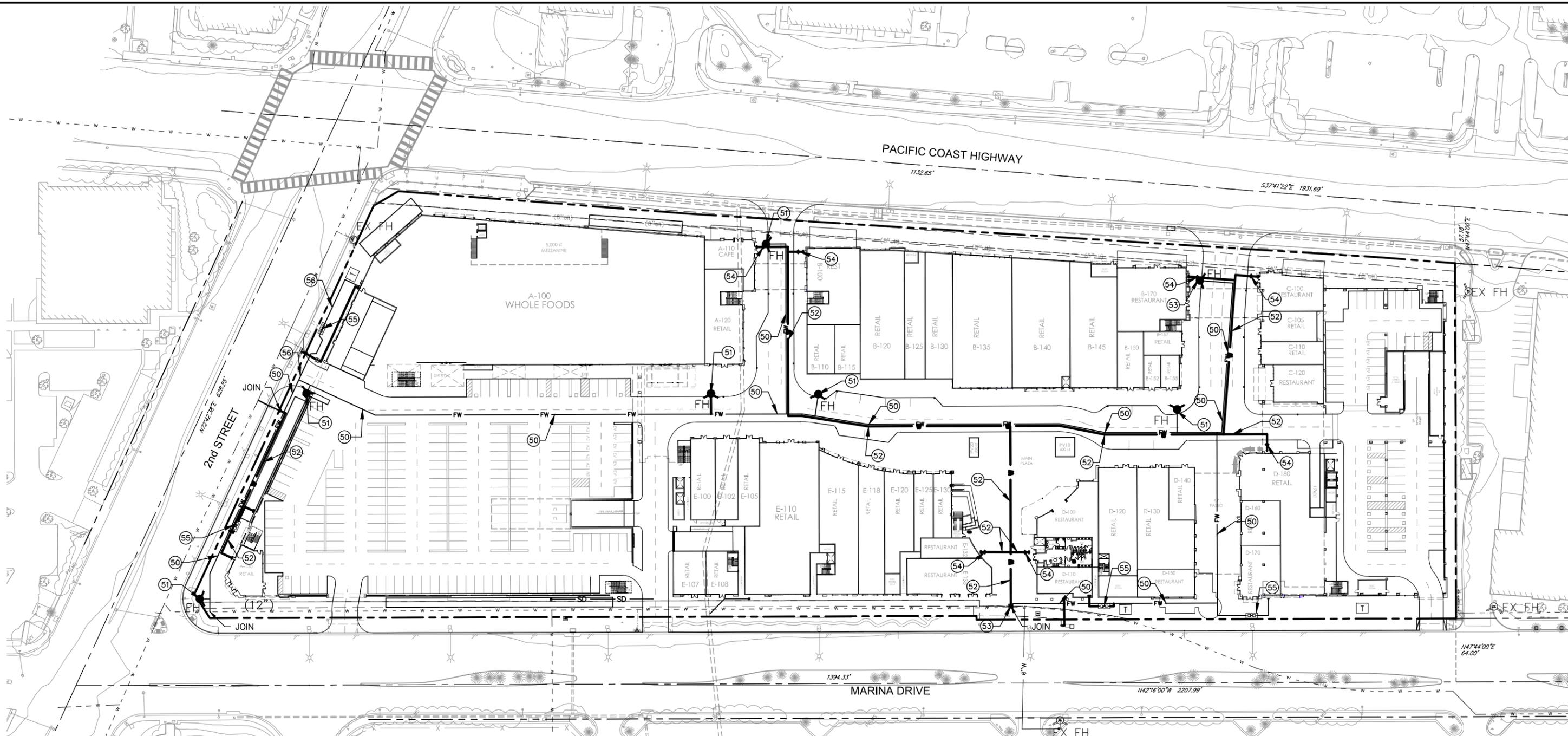
Figure 1 shows the project location, the existing water lines serving the site and the water line improvements proposed.

Table 1 on the following page shows the proposed development uses and building square footages along with inside water demand factors and inside water demand, which is also the estimated average wastewater flow. This demand is shown in gallons per day (gpd) as well as in acre-feet per year (AFY). On top of the inside water demand, landscape irrigation demand is added generating a total water demand for the proposed project of 121.3 AFY. The landscape irrigation demand is generated using the total square footage of landscaped area of 58,721 provided by the landscape architect, Lifescapes, to calculate the maximum applied water allowance (MAWA) using the evapotranspiration adjustment factor (ETAF) of 0.45 for non-residential landscape irrigation times the local Evapotranspiration rate of 39.7 inches per year per the Model Water Efficient Landscape Ordinance (MWELo). Actual landscape irrigation use may be less than this but cannot exceed this amount per the Ordinance. Then the existing water demand on the project site is subtracted to generate a total net water demand of 107.3 AFY.

cc: Steve Schaul – CenterCal
Bruce Kirby – Psomas

Table 1 – Estimated Water Demand

Proposed Land Use	Total Building Area (sf)	Wastewater or Inside Water Demand Factor^a	Project Demand (gpd)	Project Demand (AFY)
Grocery	55,000	50 gpd/ksf	2,750	3.1
Retail	95,000	50 gpd/ksf	4,750	5.3
Restaurant, Dinner	40,000	1,200 gpd/ksf	48,000	53.8
Restaurant, Ready-to-Eat	5,000	1,200 gpd/ksf	6,000	6.7
Restaurant, Fast-Food	25,000	1,200 gpd/ksf	30,000	33.6
Fitness/Health Club	25,000	600 gpd/ksf	15,000	16.8
Landscape Irrigation ^b	--	--	1,782	2.0
Total Water Demand			108,282	121.3
Existing Water Demand ^c			(12,498)	(14.0)
Net Water Demand			95,784	107.3
<p><i>AFY = acre-feet per year</i> <i>gpd = gallons per day</i> <i>sf = square feet</i> <i>1 acre-foot = 325,851 gallons</i></p> <p>^a <i>Demand factors based on Los Angeles County Sanitation Districts wastewater generation rates.</i></p> <p>^b <i>Irrigation demand based on proposed landscape plan square footage and MWELO requirement of 0.45 ETAF.</i></p> <p>^c <i>Existing demand from Long Beach Water Department, May 2010.</i></p>				

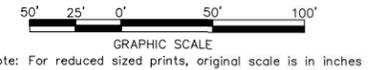


WATER CONSTRUCTION NOTES:

- 50 INSTALL 8-INCH PVC FIRE WATERLINE
- 51 INSTALL FIRE HYDRANT
- 52 INSTALL 4-INCH PVC DOMESTIC WATERLINE
- 53 INSTALL 2-INCH WATER SERVICE METER
- 54 INSTALL WATER SERVICE SUB-METER
- 55 INSTALL DOUBLE DETECTOR CHECK ASSEMBLY
- 56 INSTALL 6-INCH PVC FIRE WATERLINE

LEGEND

- FW FIRE WATER LINE (NO METER)
- DOMESTIC WATER LINE (MASTER METER)
- EXISTING WATER LINE
- EASEMENT
- CENTERLINE
- PROPERTY LINE
- FH PROPOSED FIRE HYDRANT
- EX FH EXISTING FIRE HYDRANT
- WATER METER
- DOUBLE DETECTOR CHECK ASSEMBLY
- SUB-METER



BASE: DLP #48

PLANS PREPARED BY:

PSOMAS

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PREPARED FOR:

CENTERCAL
PROPERTIES, LLC

1600 EAST FRANKLIN AVENUE
EL SEGUNDO, CA 90425

2ND STREET and PACIFIC COAST HIGHWAY PROJECT
FINAL SCHEMATIC DESIGN (ZONE 2) PACKAGE

WATER PLAN

IN THE CITY OF LONG BEACH COUNTY OF LOS ANGELES STATE OF CALIFORNIA

DATE:	03-31-17	SHEET	C06.0
SCALE:	1' = 50'		8
PROJECT NUMBER:	2CEN110300	OF	9

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