

June 10, 2020
City of Fullerton
Public Works –General Engineering
Department Contact: Yelena Voronel

Subject: Goodman Logistics Center- Fullerton
PRJ 2019-00173-
Sewer Capacity Memorandum

The proposed project is a redevelopment of the existing Kimberly Clark manufacturing facility located at 2001 East Orangethorpe Avenue in the city of Fullerton. The existing facility is occupied by buildings totaling 1,210,720 square foot (sf). The site is serviced by sewer and water facilities owned by the City of Fullerton which area owned and maintained by the City Public Works Department. The Site is located south of Kimberly Avenue, East of Acacia Avenue and west of State College Boulevard. The project is approximately 65.42 net acres.

The proposed improvements consist of an approximately 1,456,522 sf of warehouse space and approximately 105,000 sf of office space (ground floor and mezzanine). It should be noted that the project applicant has engaged in negotiations for acquisition of an off-site property located south of proposed Building 3 and north of Orangethorpe Avenue. This property encompasses approximately 0.7acres and if developed it will allow for a larger footprint of Building 3 resulting in a total warehouse space of 1,504,384sf and 105,000sf of office space. For the purpose of this analysis, the larger building areas were used to generate a conservative estimate of the sewer generation factors. The project site plan and optional site plan are included in Attachment A.

The proposed project sewer generation factors are expected to be a percentage of the domestic water demands only; however, for the purpose of estimating conservative projected sewer generation values, it is considered that domestic/indoor water demands equals to the sewer generation for the project.

The indoor water demand for the proposed project was estimated to be **36,388 gpd**. This value was obtained by multiplying the estimated unit water demand factors for office and warehouse in gallons per day per thousand square feet (gpd/ksf). A factor of 60gpd/ksf for office and 20gpd/ksf for warehouse were used. A detailed breakdown of the calculations for indoor water use is provided on the technical memorandum prepared by Psomas and included herewith as Attachment B.

Information provided by Kimberly Clark from the project sewer and water bills indicate that the sewer generation of the existing Kimberly Clark facility generates much larger sewer quantities. Approximately 1 million GPD on average is currently being generated by the existing Kimberly Clark facility.

The actual sewer effluent per year for the KC facility is shown on the table below.

Effluent Sewer Data for Existing Kimberly Clark Facility

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Effluent m ³	1,956,906	1,549,898	1,483,578	1,743,696	1,891,797	1,690,754	1,363,091	1,326,408	1,083,941

Average	Average /Day (m ³)	Average /Day (GPD)
1,565,563	4,289	1,133,082

The projected sewer generation is less than 5% of the existing effluent for the site. Due to the much larger sewer generation of the existing facility, it is anticipated the existing sewer has adequate capacity for the new project demands.

The site has a connection to an existing 18" VCP City Sewer line that runs along Kimberly Avenue and has a lateral that comes to the site at the northeast portion of the site. The 18" sewer flows to an existing 33" OCSD (Orange County Sanitation District) line that runs along State College.

Each office complex is anticipated to have its own sewer lateral that will connect to the city public sewer main. In the proposed condition, the 18" existing lateral will be utilized and serve the office spaces located at the north of buildings 3 and 4. Other sewer laterals are proposed to connect to a second 18" VCP sewer line running along Kimberly Avenue as well as laterals connecting to the 12" sewer running along Orangethorpe Avenue.

A copy of the existing sewer Map and the proposed sewer plan is included in Attachment C.

Sincerely,

Jacob Vandervis
 RCE No. C46301

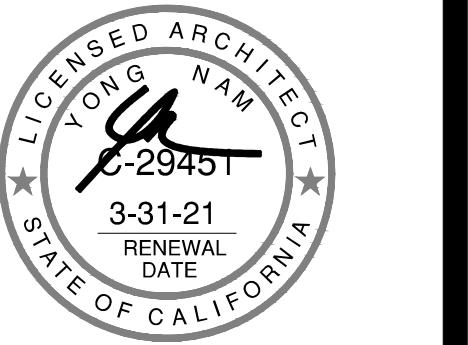


701 N. Parkcenter Drive, Santa Ana, CA 92705

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**Attachment A - Project Current Site Plan
And
Optional Site Plan with additional 0.7ac property South of Building 3**



Owner:



18201 Von Karman Ave., Suite. 1170
Irvine, CA 92612
tel: (949) 407.0100

Project:

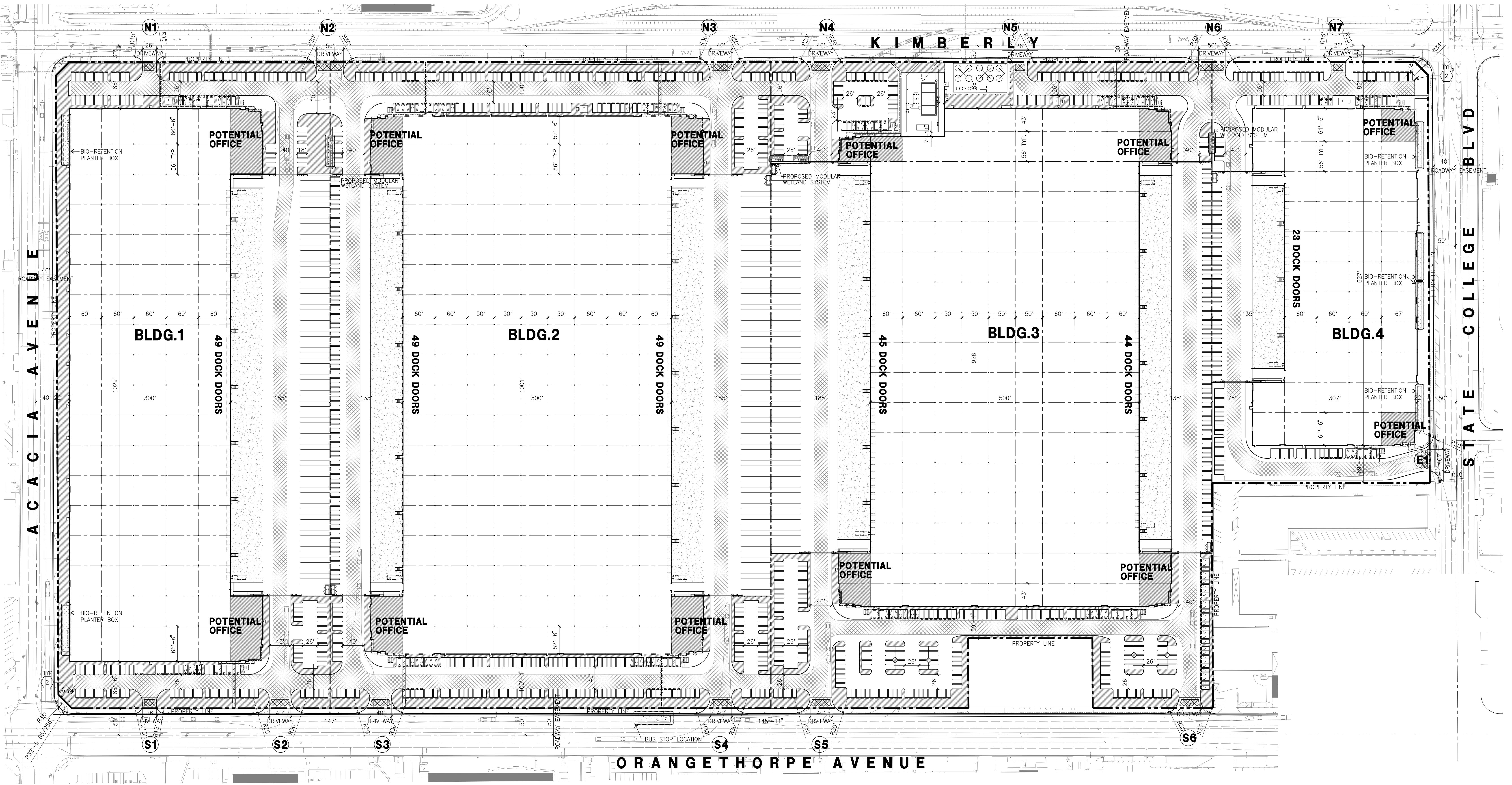
GOODMAN
LOGISTICS CENTER
- FULLERTON

FULLERTON, CALIFORNIA

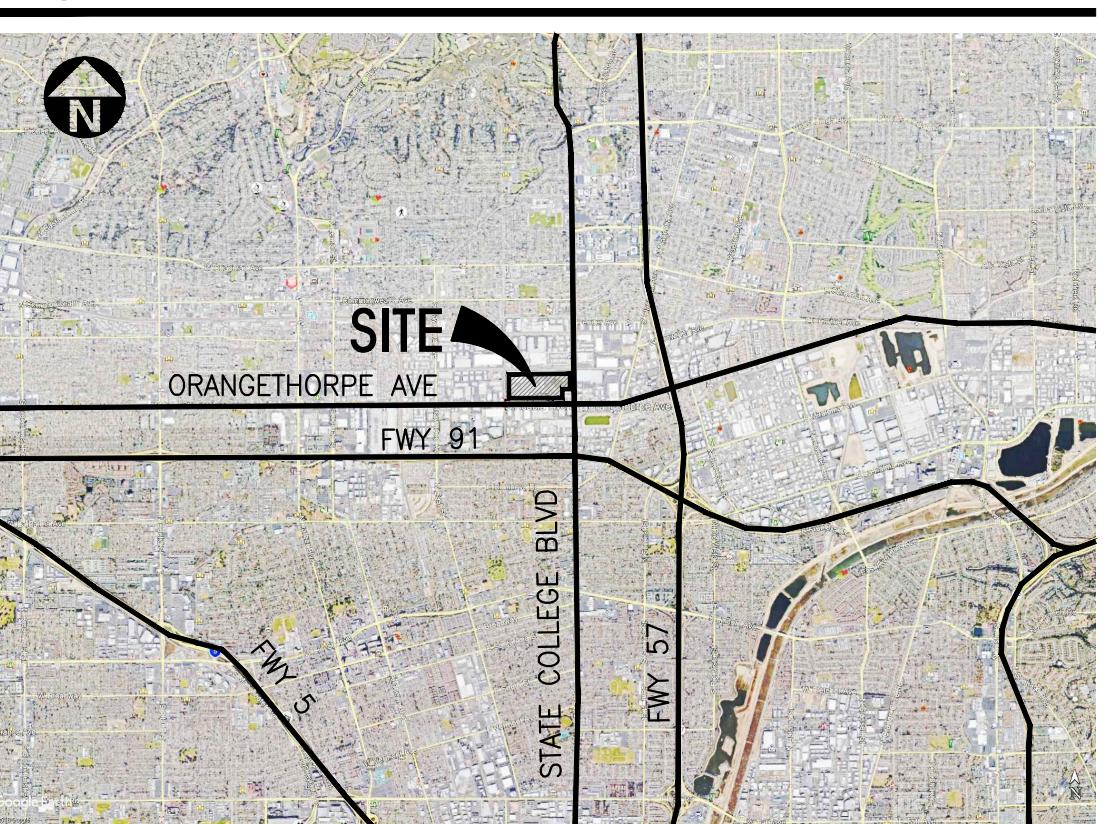
Consultants:

CIVIL
STRUCTURAL
MECHANICAL
PLUMBING
ELECTRICAL
LANDSCAPE
FIRE PROTECTION
SOILS ENGINEER

Gregg electric
Hunter Landscape



VICINITY MAP



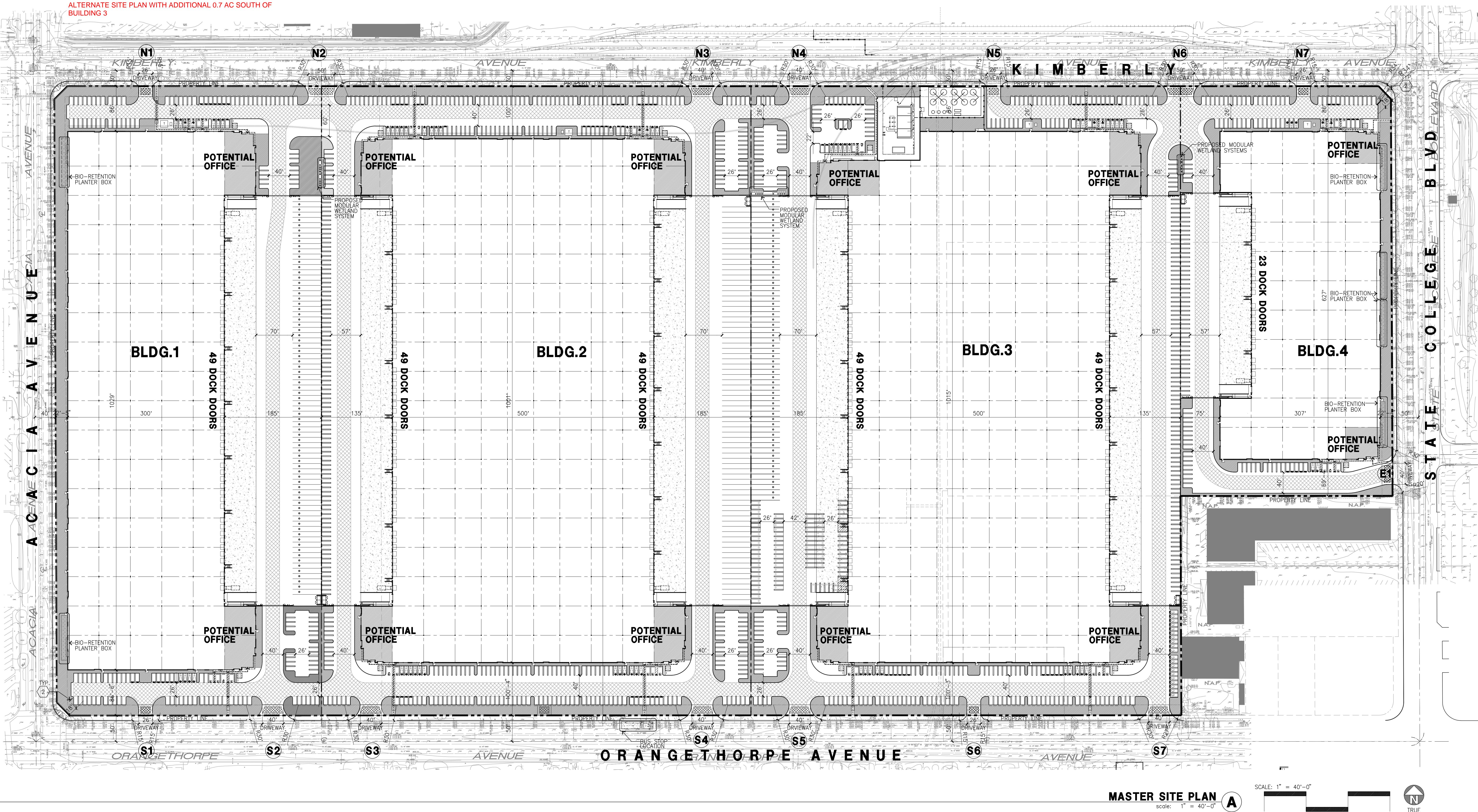
PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	BLDG. 4	TOTAL
SITE AREA					
In s.f. (Net Area)	609,340	985,420	938,426	316,300	2,849,486 s.f.
In acres	13.99	22.62	21.54	7.26	65.42 s.f.
In s.f. (Gross Area)	712,833	1,067,287	1,025,153	378,238	3,183,511 s.f.
In acres	16.36	24.50	23.53	8.68	73.08 a.f.
BUILDING AREA					
Office - 1st floor	10,000	10,000	10,000	5,000	35,000 s.f.
Office - 2nd floor	20,000	20,000	20,000	10,000	70,000 s.f.
Warehouse	312,695	515,255	465,290	163,282	1,456,522 s.f.
TOTAL	342,695	545,255	495,290	178,282	1,561,522 s.f.
COVERAGE					
56.2%	55.3%	52.8%	56.4%	54.8%	
INTERIOR CLEAR HEIGHT					
40'	40'	40'	36'		
ESTIMATED TOP OF PARAPET					
55'	55'	55'	50'		
AUTO PARKING REQUIRED					
Office: 1/250 s.f.	120	120	120	60	420 stalls
Warehouse: 1/2,000 s.f.	157	258	233	82	730 stalls
TOTAL	277	378	353	142	1,151 stalls
AUTO PARKING PROVIDED					
Standard (8.5' x 18')	133	263	246	77	719 stalls
Compact (8' x 16') 30% of required space	0	0	29	0	29 stalls
Accessible Parking (9' x 18')	5	6	7	4	
Accessible Van Parking (12' x 18')	1	2	2	1	
EV Parking (8.5' x 18')	8	22	24	5	
EV Standard Accessible (9' x 18')	1	1	1	1	
EV Van Accessible (12' x 18')	1	1	1	1	
EV Ambulatory (10' x 18')	0	0	1	0	
Clean Air/Van pool (8.5' x 18')	16	31	35	11	
Total	165	326	346	100	937
Parking inside truck yard	0	89	82	43	214
GRAND TOTAL	165	415	428	143	1,151 stalls
Visitor Parking (20% of total)	33	83	86	29	230 stalls
Bicycle Parking Required					
short term - exterior (5% of visitor parking)	2	4	4	1	12 stalls
long term - interior (5% of non-visitor parking)	7	17	17	6	46 stalls
Bicycle Parking Provided					
short term - exterior (5% of visitor parking)	5	5	5	5	20 stalls
TRAILER PARKING PROVIDED					
Trailer (10' x 55')	76	76	70		222 stalls

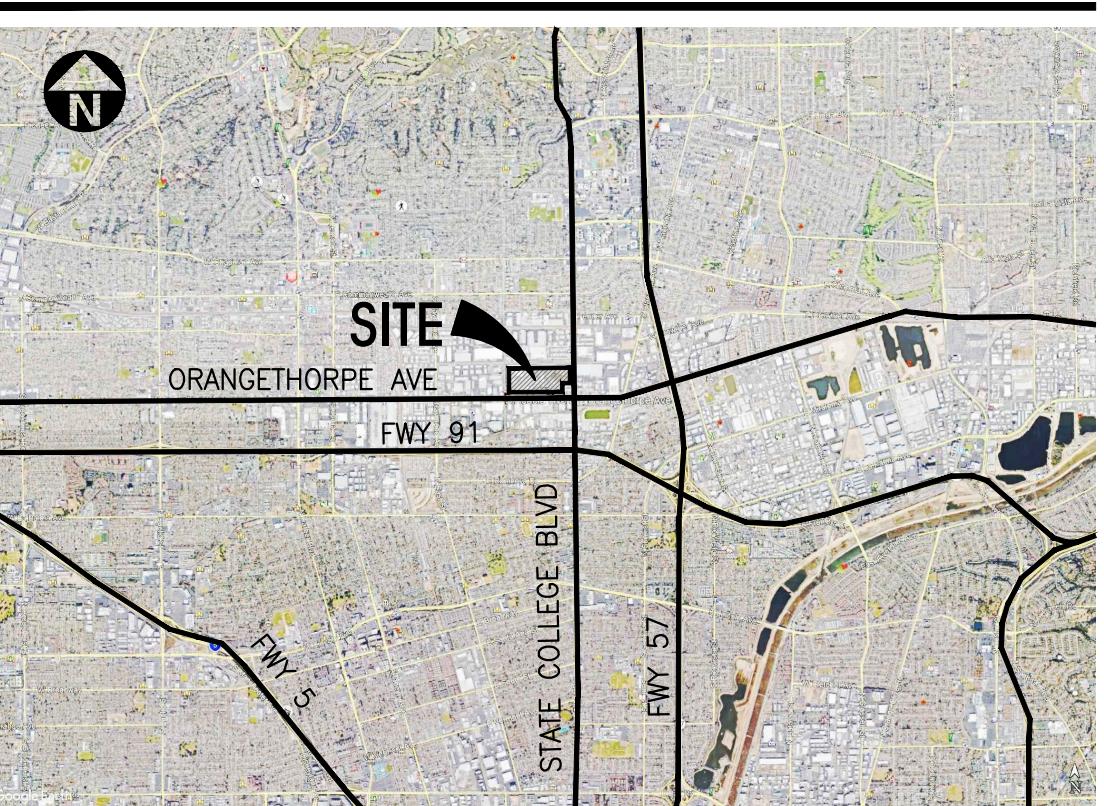
Title: MASTER SITE PLAN
Project Number: 18465
Drawn by: AW/GC
Date: 6/10/20
Revision:

Sheet:

DAB-A1.0



VICINITY MAP



PROJECT DATA

	BLDG. 1	BLDG. 2	BLDG. 3	BLDG. 4	TOTAL
SITE AREA					
In s.f. (Net Area)	609,340	985,420	968,457	316,300	2,879,517 s.f.
In acres	13.99	22.62	22.23	7.26	66.10 ac
In s.f. (Gross Area)	712,833	1,067,287	1,066,734	378,238	3,225,092 s.f.
In acres	16.36	24.50	24.49	8.68	74.04 ac
BUILDING AREA					
Office - 1st floor	10,000	10,000	10,000	5,000	35,000 s.f.
Office - 2nd floor	20,000	20,000	20,000	10,000	70,000 s.f.
Warehouse	312,695	515,255	513,152	163,282	1,504,384 s.f.
TOTAL	342,695	545,255	543,152	178,282	1,609,384 s.f.
COVERAGE					
56.2%	55.3%	56.1%	56.4%	55.9%	
INTERIOR CLEAR HEIGHT					
40'	40'	40'	36'		
ESTIMATED TOP OF PARAPET					
55'	55'	55'	50'		
AUTO PARKING REQUIRED					
Office: 1/250 s.f.	120	120	120	60	420 stalls
Warehouse: 1/2,000 s.f.	157	258	257	82	754 stalls
TOTAL	277	378	377	142	1,174 stalls
AUTO PARKING PROVIDED					
Standard (8'5" x 18')	133	263	195	77	668 stalls
Compact (8' x 16') 30% of required space			20		20 stalls
Accessible Parking (9' x 18')	5	6	6	4	
Accessible Van Parking (12' x 18')	1	2	2	1	
EV Parking (8'5" x 18')	8	22	21	5	
EV Standard Accessible (9' x 18')	1	1	1	1	
EV Van Accessible (12' x 18')	1	1	1	1	
Clean Air/ Van pool (8'5" x 18')	16	31	30	11	
Total	165	326	276	100	867
Parking inside truck yard	0	89	176	43	308
GRAND TOTAL	165	415	452	143	1,175 stalls
TRAILER PARKING PROVIDED					
Trailer (10' x 55')	76	76	58		210 stalls

ZONING ORDINANCE FOR CITY

Zoning Designation - Manufacturing Park (M-P)

MAXIMUM BUILDING HEIGHT

Height - 55'

MAXIMUM FLOOR AREA RATIO

N/A

SETBACKS

Building: 20'
Landscape: 20'

along public St. - 20'

along public alley - 5'

along property with a P-L zone - 10'



hpa, inc.
18831 bardeen avenue, ste. #100
irvine, ca 92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparchs.com



Owner:

Goodman
18201 Von Karman Ave., Suite. 1170
Irvine, CA 92612
tel: (949) 407.0100

Project:

GOODMAN
LOGISTICS CENTER
- FULLERTON

FULLERTON, CALIFORNIA

Consultants:

CIVIL
STRUCTURAL
MECHANICAL
PLUMBING
ELECTRICAL
LANDSCAPE
FIRE PROTECTION
SOILS ENGINEER

Gregg electric
Hunter Landscape

Title: MASTER SITE PLAN FOR EIR

Project Number: 18465

Drawn by: AW/GC

Date: 6/10/20

Revision:

Sheet:

DAB-A-EIR



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Attachment B - Water Demand Estimate Technical Memorandum by Psomas

To: Tiffany Foo
From: Mike Swan
Date: March 24, 2020
Subject: Goodman Logistics Center – Fullerton Water Demand Estimate



Proposed Project Location

The Proposed Project, the Goodman Logistics Center - Fullerton is a warehouse development including corresponding offices located in the City of Fullerton (the City) on a 66.12-net acre site at 2001 East Orangethorpe Avenue. The Project site is bounded by Acacia Avenue on the west, Kimberly Avenue on the north, State College Boulevard on the east and Orangethorpe Avenue on the south. The Proposed Project site vicinity and location maps are shown on Figure 1 and 2, respectively.

Existing Site Use

The Project site is currently occupied by a manufacturing facility, with existing buildings totaling 1,210,720 square feet (sf). These existing buildings consist of 418,720 sf of manufacturing and 792,000 sf of warehouse uses. The current operations and associated use of the site will terminate by June 2020. The City of Fullerton Water Department maintains a water well facility in the north-central portion of the site west of the Kimberly Avenue access driveway, and there is a Southern California Edison (SCE) substation generally in the center of the Project site. A storage lot for recreational vehicles is located in the northeast corner of the Project site, which operates under a lease agreement with the current owner.

Proposed Project Characteristics

The Proposed Project encompasses the demolition of all existing structures on the site, with the exception of the City's existing water well facility, and construction of four new buildings with a mix of primarily warehouse and associated office space uses. The Project site statistics as well as the water demand-related characteristics are shown in Table 1.

The proposed development plan includes approximately 1,456,522 sf of warehouse space and approximately 105,000 sf of office space (ground floor and mezzanine). It should be noted that the Project Applicant has engaged in negotiations for acquisition of an off-site, approximately 0.7-acre property, located south of proposed Building 3 and north of Orangethorpe Avenue (Duncan parcel). In the event the Project Applicant is able to acquire this property, Building 3 could be expanded to include approximately 47,862 sf of additional floor area, which would bring Building 3's total floor area to 543,152 sf and the Proposed Project's total floor area to 1,609,384 sf, including 1,504,384 sf of warehouse space and 105,000 sf of office space. Therefore, these higher Project Characteristics are shown in Table 1 will be utilized to generate a conservative estimate of

indoor water demands for the Water Supply Assessment (WSA). The landscape demands, also served by potable water, will be estimated based on the landscape area provided by the Project's landscape architect and include the Duncan parcel as well. The Project is proposed to be completed, by individual building in phases with all demands on-line by 2022.

Table 1. Project Characteristics

	Building 1	Building 2	Building 3	Building 4	Total
Site Area					
Net Area in square feet (sf)	609,261	984,881	969,832	316,115	2,880,089
Net Area in acres (ac)	13.99	22.61	22.26	7.26	66.12
Building Area (sf)					
Office - 1st floor	10,000	10,000	10,000	5,000	35,000
Office - 2nd floor	20,000	20,000	20,000	10,000	70,000
Warehouse Area	312,695	515,255	513,152	163,282	1,504,384
Total	342,695	545,255	543,152	178,282	1,609,384
Landscape Area (sf)					
Landscape	59,080	50,006	54,039	34,667	197,792

Water Demand for Project Area

Indoor water demand for the Proposed Project was estimated by multiplying estimated unit water demand factors for office and warehouse use in gallons per day per thousand square feet (gpd/ksf) by the appropriate building square footage. The Project will be designed to be water-efficient and meet or exceed all current water efficiency standards and regulations. An office use of 60 gpd/ksf was estimated using the Irvine Ranch Water District's (IRWD) factor from their Water Resources Master Plan¹. IRWD's Master Plan utilized water meter records collected over an 8-year period as the basis for determining interior water use factors for non-residential land uses. The vast majority of irrigated non-residential lots in the IRWD service area are served through separate recycled water irrigation meters. As a result, the IRWD Master Plan provides empirical data for indoor water use separate from outdoor use.

Since IRWD did not develop or report a factor for warehouse use, that use is estimated based on the County Sanitation Districts of Los Angeles County (CSDLAC) sewer loading criteria for warehousing land use and adjusted for current water efficiency standards². The LACSD loading for warehouse use is 25 gpd/ksf, which value has not been updated to reflect current building code water fixture standards. As such, an adjusted value of 20 gpd/ksf was utilized assuming a 20%

¹ Irvine Ranch Water Disrtict, Water Resources Master Plan, 2002 Table 3-1 Land Use and Water Use Factors, Updated July 2003.

² County Sanitation Districts of Los Angeles County, "Revenue Program Report", Table 3, November 2007, Updated March 2017.

savings achieved by low flow fixtures required by current building and plumbing codes. The estimated indoor water use factors and indoor water demand, which would also be the estimated sewer flow, by building use type are summarized in Table 2.

Table 2. Estimated Indoor Water Use

Building Use	Area (sf)	Unit Water Use (gpd/ksf)	Water Use (gpd)	Water Use (AFY)
Warehouse	1,504,384	20	30,088	33.7
Office	105,000	60	6,300	7.1
Total Indoor Water Use			36,388	40.8

The State Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) limits potable landscape water irrigation to a Maximum Applied Water Allowance (MAWA) which is calculated in gallons per year as follows based on an Evapotranspiration Adjustment Factor (ETAF) of 0.55 for residential and 0.45 for non-residential use, the total landscaped area (LA) in square-feet, and the local reference evapotranspiration (ETo) rate in inches per year, where 0.62 is a conversion factor.

$$\text{MAWA} = (\text{ETAF})(\text{ETo})(0.62)(\text{LA})$$

As the Proposed Project is a non-residential use, an ETAF of 0.45 applies. The total landscape area of the Proposed Project area will be 197,792 sf as shown in Table 1 per preliminary landscape plan area takeoffs prepared by Hunter Landscape, Inc., the Project Landscape Architect.

The ETo for the Project area is approximately 49.7 inches derived from the California Irrigation Management Information System (CIMIS) Spatial CIMIS data by zip code for zip codes in the City of Fullerton as reported in Ordinance No. 3226 “An Ordinance of the City Council of the City of Fullerton, California, Amending Title 15 of the Fullerton Municipal Code Pertaining to Landscaping and Irrigation Requirements”. Using the formula above, the Maximum Applied Water Allowance (MAWA) for the Project area is calculated as 2,742,643 gallons per year or 7,514 gallons per day (8.4 AFY) using the maximum allowable ETAF of 0.45. The irrigation demand is conservatively estimated using the MAWA for the WSA and will likely come in lower based on actual plant materials selected and irrigation system efficiencies.

The estimated water demand for each use and total water demand for the Proposed Project are summarized in Table 3, with the total estimated use being 43,902 gpd (36,388+7,514) or 49.2 AFY.

Table 3. Estimated Project Water Use

	Area (sf)	Water Use (gpd)	Water Use (AFY)
Building Area (Indoor Use)			
Warehouse	1,195,340	30,088	33.7
Office	40,000	6,300	7.1
Building Subtotal	1,235,340	36,388	40.8
Landscape Area (Outdoor Use)			
Total Landscape Area & Use	197,792	7,514	8.4
Total Water Use		43,902	49.2

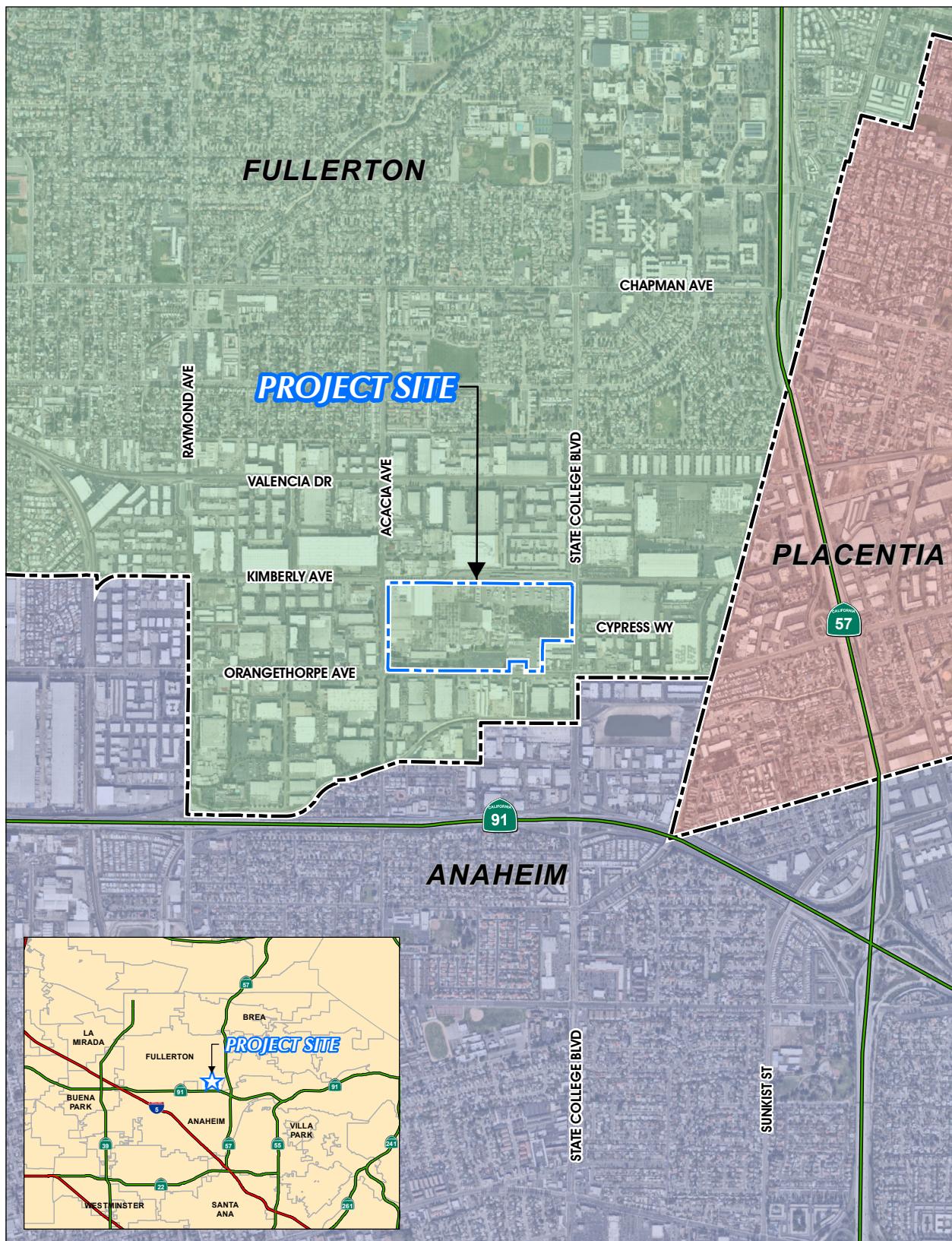
As a check, the resulting total water use equates to approximately 22 gpd per employee, based on the maximum of 2,000 employees. The Environmental Protection Agency documented an average daily water demand in commercial/industrial settings between 20 and 35 gpd per employee³. The Federal Energy Management Program documented an estimated range of between 8 and 20 gpd/employee for office use.⁴ This demonstrates the wide range of estimated use per employee depending on area of the country and building type. The demand estimate calculated using the above per sf methodology correlates with this range. The 2,000 employees was provided as the maximum for the Project and with a less conservative number, the equivalent use per employee would increase.

The WSA will utilize the net new water demand for the Project site to evaluate if there is sufficient supply to meet the demands of the Project as well as all other existing and planned future water demand for the City over the next 20 years. The net new demand for the Project area would be the difference between the existing water use and the estimated new water demand for the site and would typically be a positive number. However, since the previous manufacturing use on this site generated in a substantially higher water use, the net new demand will be negative or a reduction in demand for the Project site with implementation of the Project. As discussed above, all existing buildings in the Project area will be demolished to make room for the new uses on the Project site, i.e. Buildings 1 through 4 shown in Table 1. Based on previous water use on the Project site over the past five years and the estimated water use documented above, the Proposed Project's buildout demand will result in an approximate four to six percent reduction of the total City-wide water use.

Attachments: Figures 1 and 2

³ <http://www.dartmouth.edu/~cushman/courses/engs44/water.pdf>

⁴ <https://www.energy.gov/eere/femp/federal-water-use-indices>



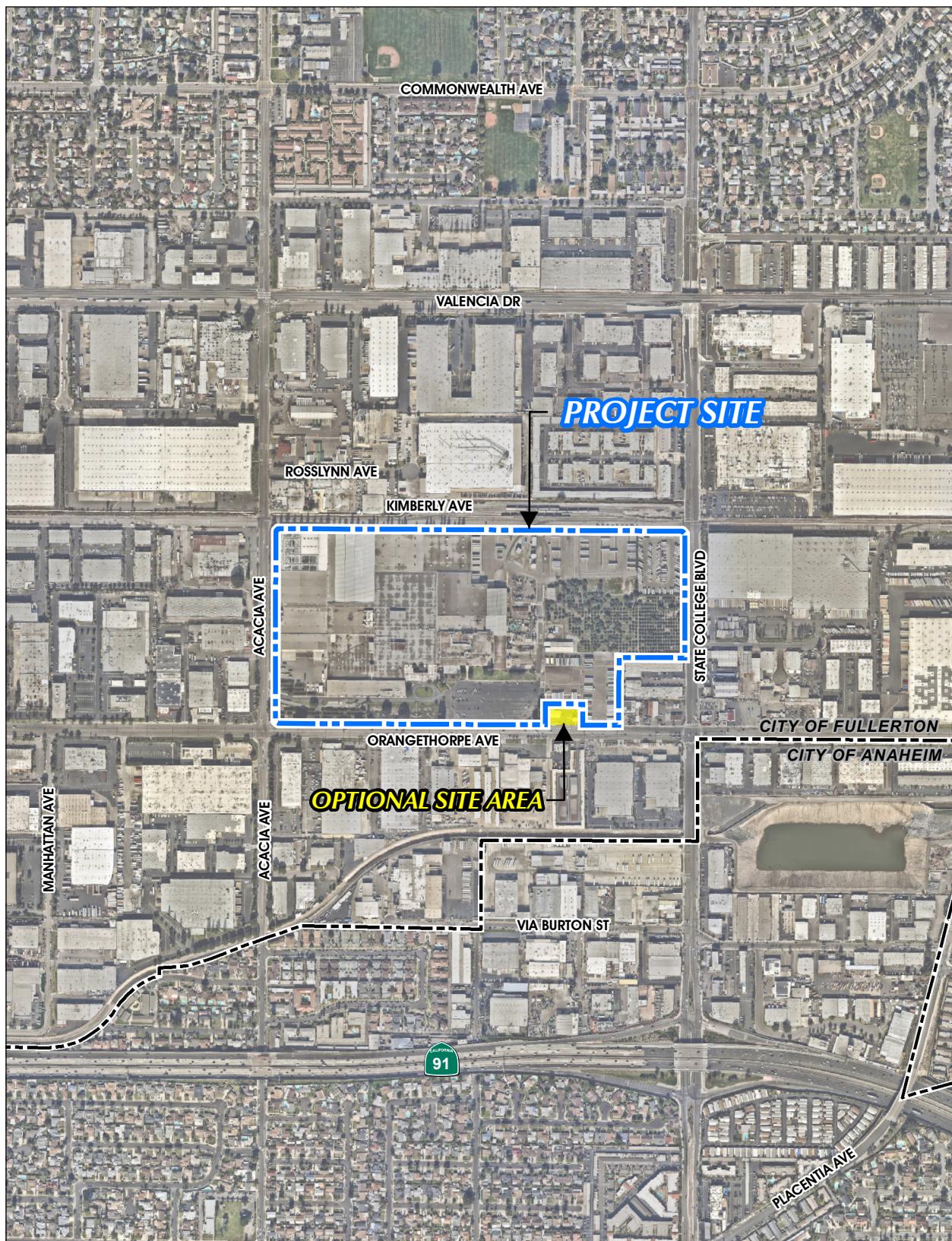
Source(s): ESRI, Nearmap Imagery (2019), OC Landbase (2019)

Figure 1



0 500 1,000 2,000
Feet

VICINITY MAP



Source(s): ESRI, Nearmap Imagery (2019), OC Landbase (2019)

Figure 2

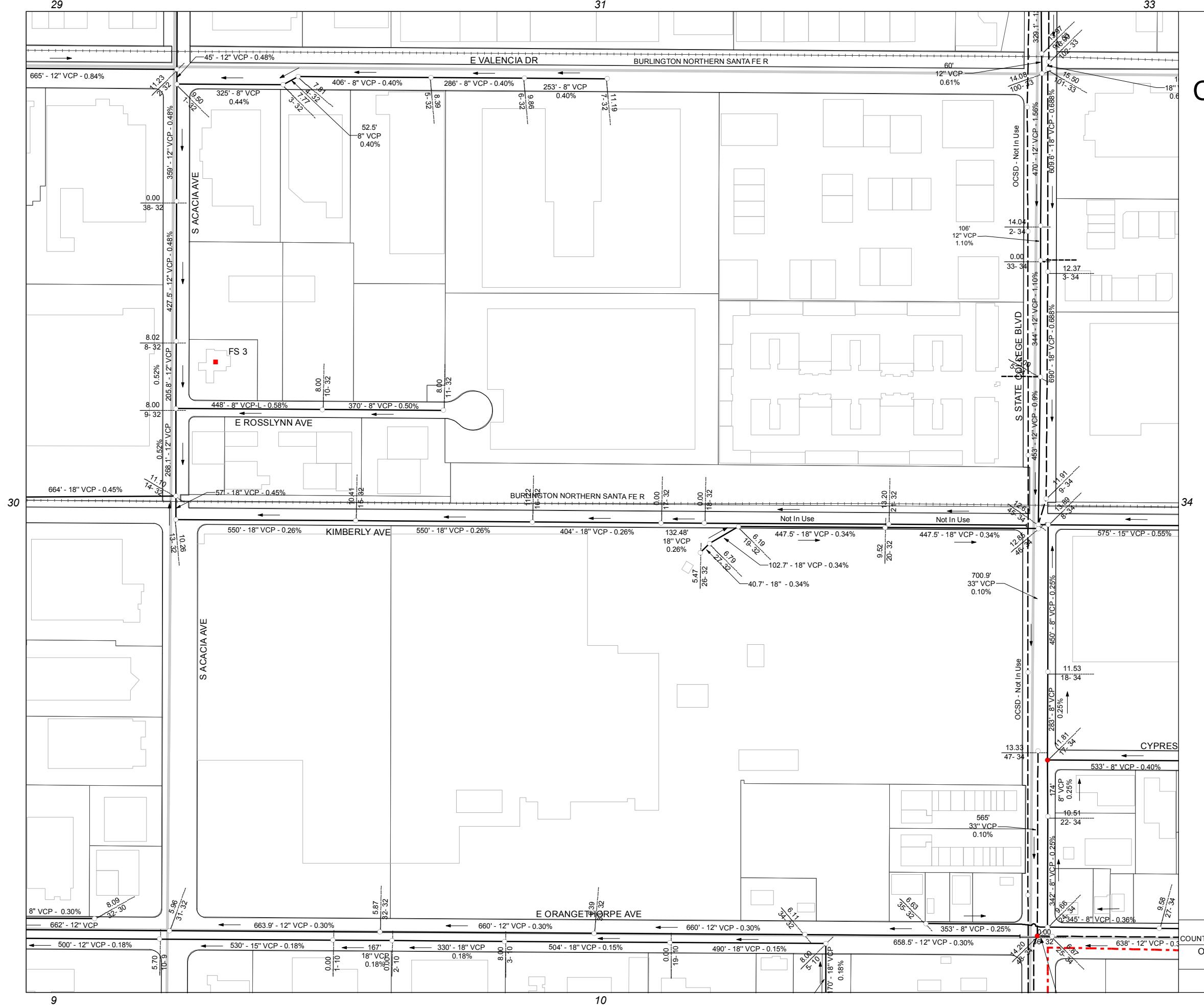
LOCATION MAP



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Attachment C - Existing Sewer ATLAS Map & Proposed Preliminary Wet Utility Plan



CITY OF FULLERTON

SEWER SYSTEM



LEGEND

- The legend contains the following entries:

 - SEWER MAINS**: Represented by a thick black horizontal line.
 - COUNTY, OTHER CITY OR PRIVATE LINES**: Represented by a thin black horizontal line.
 - FLOW DIRECTION**: Represented by a thick black arrow pointing right.
 - MANHOLE**: Represented by an open circle.
 - LAMPHOLE**: Represented by a solid black circle.
 - DROPHOLE**: Represented by a red circle.
 - SPLIT FLOW MANHOLE**: Represented by a blue circle.
 - DUMMY MANHOLE (NO ACCESS POINT)**: Represented by a vertical black line segment.

A callout box at the bottom left defines symbols for **FLOWLINE DEPTH FROM TOP OF MANHOLE** (a horizontal line with an arrow) and **MANHOLE NUMBER** (an arrow pointing to the number "O"). A dimension line above the callout indicates a distance of **1.00**.

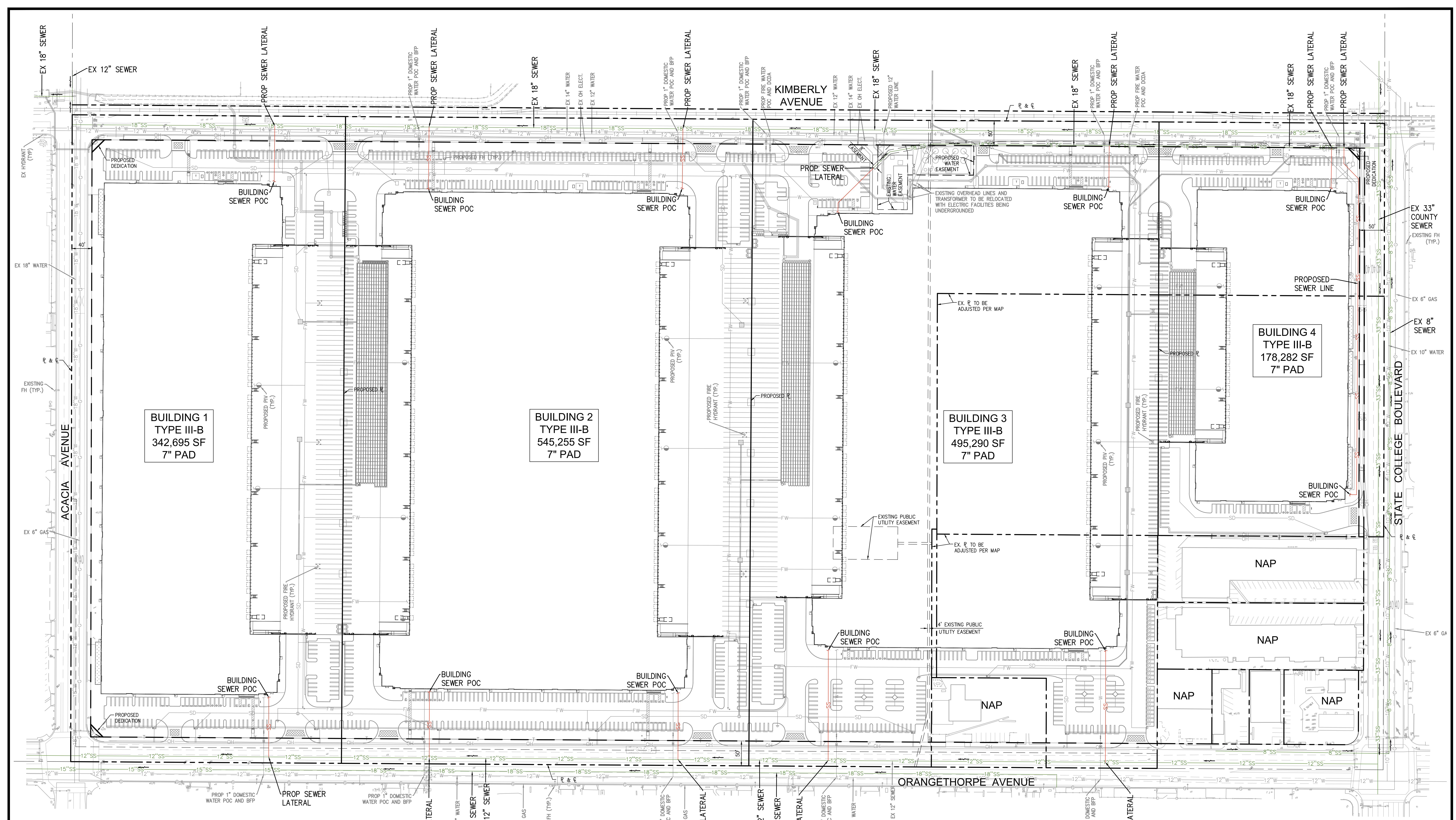
- A legend containing six entries, each with a colored square or line segment followed by a label: SCHOOL (yellow), PRIVATE STREET (dashed black line), PARK (green), CITY BOUNDARY (magenta dashed line), ATLAS GRID (grey solid line), and RAILROAD (grey solid line). The bottom row contains two entries: PARKING LOT (grey solid line) and POINT OF INTEREST (red square).

PIPE MATERIAL ABBREVIATIONS

PIPE MATERIAL ABBREVIATIONS	
VCP	VITRIFIED CLAY
VCP-L	VITRIFIED CLAY PIPE - LINED
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
DIP	DUCTILE IRON
RCP	REINFORCED CONCRETE
CP	CONCRETE (NON-REINFORCED)
CIP	CAST IRON
ABS	ACRYLONITRILE BUTADIENE STYRENE

THIS MAP IS NOT AN OFFICIAL RECORD OF THE CITY BUT IS COMPILED FROM DATA FURNISHED BY PRIVATE CONTRACTORS AND OTHER SOURCES. LOCATIONS AND SIZE OF WATER MAIN, LATERALS, VALVES, AND OTHER RELATED FACILITIES ARE SHOWN BASED ON THESE SOURCES. THIS INFORMATION IS FURNISHED TO ANY PERSON STRICTLY AS A CONVENIENCE AND THE CITY DOES NOT ASSUME ANY RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS.

BASE UPDATES
TY - 2016 ADDRESS - 2019
VERLAY REVISED
APR 2019
GRID 12 - C



LEGEND

- Existing Property Line
- Proposed Property Line
- Existing Row/Roadway Easement
- Centerline
- Proposed Easement
- Existing Easement
- Proposed Domestic Water
- Proposed Sanitary Sewer
- Existing Sanitary Sewer
- Proposed Fire Water
- Proposed Storm Drain
- Proposed Electric
- Proposed Telecom
- Existing Gas
- Existing Overhead Lines

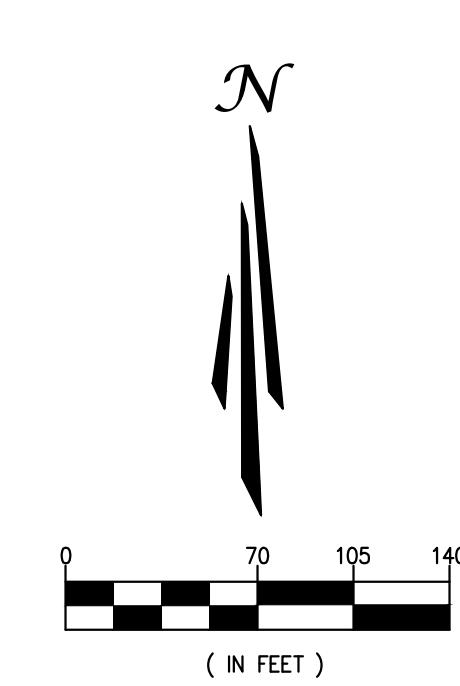
- Proposed Back-flow Preventor
- Proposed Double Check Detector Assembly
- Proposed Post Indicator Valve
- Proposed Water Valve
- Proposed Fire Hydrant
- Existing Fire Hydrant
- Proposed Transformer
- Proposed Capacitor
- Proposed Pad Mounted Switches
- POC at Building Continuation per Building MEP Plans
- Existing Sewer Direction of Flow

ABBREVIATIONS

- | | |
|------|---------------------|
| EX | Existing |
| FW | Fire Water |
| NAP | Not a Part |
| PROP | Proposed |
| SS | Sanitary Sewer |
| MH | Manhole |
| W | Domestic Water |
| POC | Point of Connection |

NOTES

1. ALL PROPOSED SEWER LATERALS SHALL BE 6" VCP PER CITY STD. PLAN 209A AND 209B.
2. ALL EASEMENTS SHOWN HEREON INTERFERING WITH PROPOSED IMPROVEMENTS SHALL BE ABANDONED, RELEASED OR RELOCATED IN CONJUNCTION WITH THE FILING OF THE FINAL PARCEL MAP.



CONCEPTUAL SEWER PLAN

GOODMAN LOGISTICS CENTER - FULLERTON
FULLERTON, CA

TAIT
Since 1964
Los Angeles • Orange County • San Diego
Engineering • Consulting • Construction