Appendix L Utilities and Landfills Information



L-1 Water and Sewer Service Plans Technical Memorandum



Technical Memorandum (Veterans Industrial Park 215)

To: Thomas Thornton, P.E., EMWD

From: Brad Sackett P.E., Webb Associates had

Date: December 9, 2016

Re: Water and Sewer Service Plans

Introduction

The purpose of this report is to determine and verify the adequacy of the proposed and existing water and sewer facilities to provide water and sewer service to the proposed Veterans Industrial Park 215 project (VIP I-215 project). Following approval of the proposed approach, final design plans will be prepared and submitted for plan check and approval. The developer is Hillwood. The project is located within March Joint Powers Authority (MJPA) jurisdiction, west of March Field runway, north of Nandina Avenue, east of the I-215 and south of the existing March Field Air Museum (refer to **Figure 1** for project location). The proposed project area is served potable water by WMWD. EMWD has agreed to provide a connection for fire flow service. EMWD and WMWD are currently working on an inter-agency agreement regarding the details of the interconnection, metering, operation and maintenance.

The project site is approximately 142.5 ac in gross area and 128.0 ac in net area. The project proposes two industrial buildings that would allow for a mix of logistics center uses for wholesale, storage, distribution, manufacturing, and/or assembly centers. Building 1 is approximately 1,017,020 S.F., and Building 2 is 1,172,832 S.F.

Water Facilities

Water Demand

Based on discussions with Hillwood, a logistics/fulfillment center is anticipated for the project and would be the basis of the domestic water demand (building interior use). Jordan & Skala Engineer, the developer's engineer for several similar projects, provided a water demand summary based on the actual water usage data from three previous similar projects (see **Appendix A**). The summary report presents 1.2 million gallon for an average month use or 40,000 GPD for average daily demand for both buildings. For industrial and commercial type of building, a peaking factor of 2.0 is typically used to estimate the maximum daily demand from the average daily demand, and the peak hourly demand from the maximum daily demand. Maximum daily demand is estimated to be 80,000 gpd or 56 gpm, and peak hourly demand is estimated to be 112 gpm. In addition, the Jordan & Skala water summary report suggested the peak 240 gpm for meter sizing.

REG Architects, the developer's landscape architect, calculated proposed landscaped areas at 1,119,080 S.F. (25.7 ac) including the proposed WQMP basin and offsite street landscape areas. Based on Riverside

County Ordinance No. 859 and EMWD's Recycled Water Landscape Irrigation Guideline revised by EMWD Code 5111, the maximum peak flow for the landscaping is calculated by using the following formula.

Maximum Annual Water Use Demand = Irrigated Area (AC) x 2.4 AFY (demand factor of irrigated area per acre based on 50% of the ETo)

Maximum Peak Demand Allowed = Irrigated Area (AC) x 2.4 AFY x 325,851/365/1440 (converting AFy to gpm) x 8 (peak factor converting the MDD to a 6 hour water window resulting in peak demand)

	Land Use Type	Irrigate Area (ACRE)	Maximum Annual Water Use Demand (ACRE-FT/YEAR)	Maximum Peak Demand Allowed (GPM)
1	Industrial Building	9.77	23.4	116.3
2	Industrial Building	14.06	33.7	167.4
3	Off-Site	1.86	4.5	22.2
	TOTAL	25.69	61.6	305.9

The time when the irrigation system is operating can be controlled to avoid the potable water peak hour for domestic demands. For this project, the peak flow rate is governed by the landscaping demand and estimated at 317 gpm by adding 10% of potable water peak flow rate for the buildings, 11 gpm, to 306 gpm.

Existing and Proposed Water Facilities

The project is located in WMWD's MARB pressure zone, set at approximately 1700-ft HGL. The existing ground elevation is 1,520-ft or lower resulting in an approximate static pressure at the site of 78 psi. WMWD currently provides water via a 14-inch diameter waterline crossing under I-215 north of Van Buren Blvd. Two additional interconnection points from EWMD provide supplemental water to the pressure zone in case the service pressure drops below EMWD system pressure at those locations. After crossing I-215, a 12-inch diameter pipeline extends southerly to the March Field Air Museum. For potable water service, the project will connect to the existing 12-inch diameter pipeline within the March Field Air Museum (reference WMWD Plans WATER356 though WATER361). For fire service, the project will connect to the existing EMWD 36-inch pipeline in Harley Knox Blvd and extend an 18-in diameter pipeline to the project site along Western Way and along the proposed Van Buren Blvd extension. The 18-in diameter pipeline will extend to separate proposed fire services for each building. The proposed 12-inch diameter pipeline will connect to an existing 12-in diameter pipeline north of the project site and extend southeasterly along the proposed Van Buren Boulevard and tie to the proposed 18-inch diameter pipeline with a normally close valve. An 8-inch diameter water pipeline is proposed to extend southerly from the 12-inch diameter pipeline to serve potable water to both buildings and the proposed irrigation services. Figure 2 presents the existing and proposed water facilities for potable service from WMWD and for fire service from EMWD. Based on the limited available capacity in the existing 14-inch diameter pipeline, the proposed interconnection facility near the intersection of Riverside Avenue and Cactus Avenue must be active to support the additional water demand created by the project.

Fire Flow Analysis

EMWD provided a hydraulic analysis for the fire flow test. The fire flow requirement is 4,000 gpm for 4 hours. The analysis assumed an 18-inch diameter pipeline from an existing 36-inch diameter pipeline in Harley-Knox Boulevard to the project site along Western Way, south side of the project site, and future Van Buren Boulevard along east of I-215. The residual pressures near front of both buildings will be 54.9 psi and 52.7 psi respectively. The project proposes a looped 10-inch diameter private fire service line around each building. The worst case scenario is two on-site fire hydrants operating at a total flow of 4,000 gpm, each one approximately 2,000 L.F. away from the proposed public 18-inch diameter pipeline for 2,000 gpm. The friction loss for each on-site fire hydrant is calculated to be 17.1 psi, resulting in a residual pressure of 35.6 psi, higher than 20 psi requirement.

Webb prepared a plan of service for the fire flow service per EMWD requirements. A copy of the initial submittal provided in **Appendix B**. EMWD is currently reviewing the POS and will provide any comments in the near future.

Inter-Agency Agreement for Interconnection

EMWD's service boundary stops at the project south boundary. Based on a meeting with EMWD staff on November 1, 2016, it is our understanding that an inter-agency meter has been proposed at the northerly end of Western Way. Currently, EMWD and WMWD are preparing an inter-agency agreement to address the ownership of new pipeline, water transfer protocol and price, maintenance and operation, and other general inter-agency agreement items.

Sewer Facilities

Sewer Generation

Sewer generation can be estimated to be 100% of average daily demand for buildings; or 40,000 gpm. Using a peaking factor of 2.5 from WMWD's Design Criteria for Sewer System Facilities, the peak sewer generation rate is 69.4 gpm (40,000 gpd x 2.5 / 1440 min).

Existing Sewer Facilities and Hydraulics

The project is within WMWD sewer service area. There are no existing WMWD sewer gravity facilities near the project site. A 10-inch diameter forcemain pipeline bisects the southwest corner of the project site. This forcemain pipeline starts at 1269 Lift Station and discharges into a gravity pipeline at the Western Water Recycling Facility (WWRF) located west of I-215. This project proposes a private lift station discharging to a 4-in forcemain and then connecting to this existing 10-inch diameter forcemain pipeline. The confluence point of the two forcemains would be located near the project site. Webb performed hydraulic analysis of the 1269 LS analyzing the future sewage flow from the proposed March Lifecare Campus. The study showed that the Total Dynamic Head (TDH) at the location of 1269 LS ranges from 111-ft to 173-ft depending upon the range of expected hydraulic conditions (see the table in Appendix C). The HGL in the existing 10-inch diameter forcemain at the proposed confluence point ranges from 1,533 ft to 1,537 ft (see HGL diagram in condensed profile in Appendix C).

The impact on the existing 1269 LS hydraulics due to additional 70 gpm is an additional 3-ft head loss as shown in the following table, which is expected to reduce the pumping flow rate at 1269 LS approximately by 10 gpm (See **Figure 4**).

	Existing Condition	Proposed Condition
Pipe length downstream of confluence	2,400 L.F.	2,700 L.F.
C-value	140	140
Pipe size	10-in	10-in
Flow rate at downstream of confluence	760 gpm	830 gpm
Velocity	3.11 fps	3.39 fps
Friction loss downstream of confluence	9-ft	12-ft
Pumping rate at LS 1269 by existing Myers 40 hp pump	760 gpm	750 gpm

The preliminary TDH for the private lift station is calculated as follows:

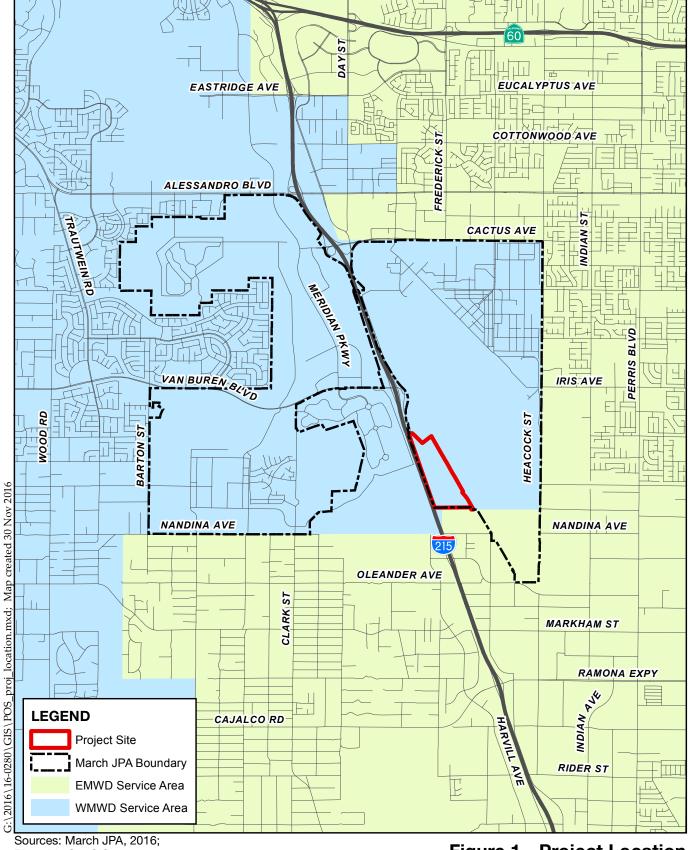
Forcemain pipe elevation at confluence point	1518-ft	
Wet well low water elevation (assumed approximately 12-ft deep wet well)	1505-ft	
Static head to confluence point		13-ft
Pipe length downstream of confluence	500 L.F.	
C-value	140	***************************************
Pipe size	4-in	
Flow rate at downstream of confluence	70 gpm	***************************************
Friction loss and minor loss for 70 gpm 500 L.F of 4-in dia. forcemain (c=140)		2-ft
Additional maximum head to overcome at the confluence point		19-ft
Total Dynamic Head	at 70 gpm	34-ft

Proposed Sewer Facilities

An existing 10-inch diameter forcemain pipeline bisects the southwest corner of the project site. The existing 10-inch diameter forcemain must be relocated along the proposed street at project south boundary to accommodate the project and keep the forcemain accessible for maintenance. The project proposes a private lift station with a design of point of 70 gpm at 34-ft TDH. The private lift station shall have two pumps, one for duty and one for stand-by. The lift station shall have a storage volume large enough to turn on and off the pump cycle per the manufacturer's recommendation.

As typical for lift stations, a check valve shall be installed to prevent sewer flow from flowing back to the proposed private lift station. There is an existing check valve at the 1269 LS site. Two line valves at the confluence point are proposed for the isolation and maintenance of two forcemain pipelines.

Approximately 500 L.F. of 4-inch diameter forcemain will tie to the relocated 10-inch diameter forcemain at the confluence point (see **Figure 3**). A SCADA system shall be provided so that WMWD can receive all the necessary signals from the private lift station. **Appendix D** presents several packaged lift station options applicable for this project. During the final engineering, coordination with WMWD Operations staff will be necessary to integrate the private lift station SCADA/telemetry into WMWD's existing system.



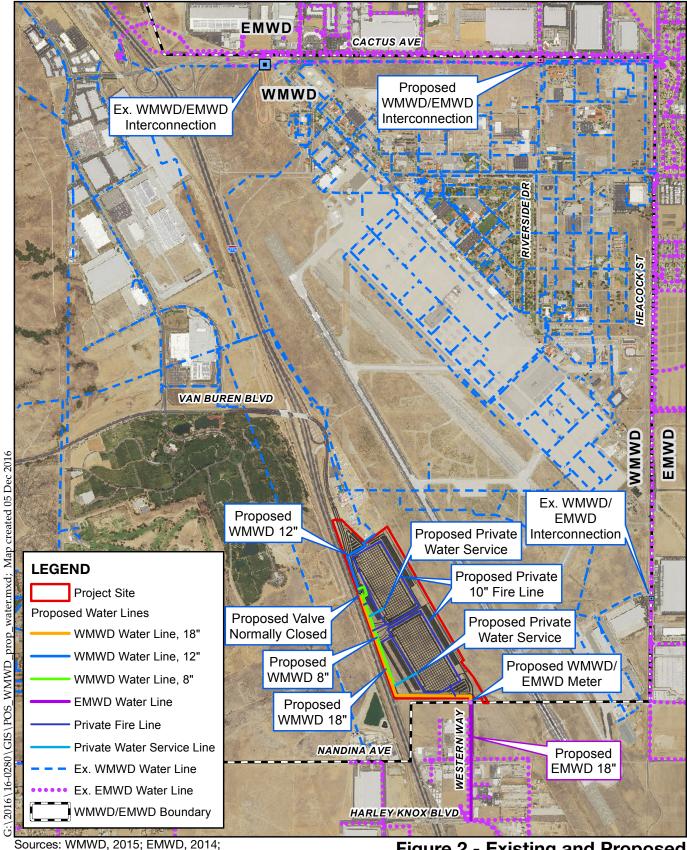
Riverside Co. GIS, 2016:

Figure 1 - Project Location

March JPA Hillwood POS







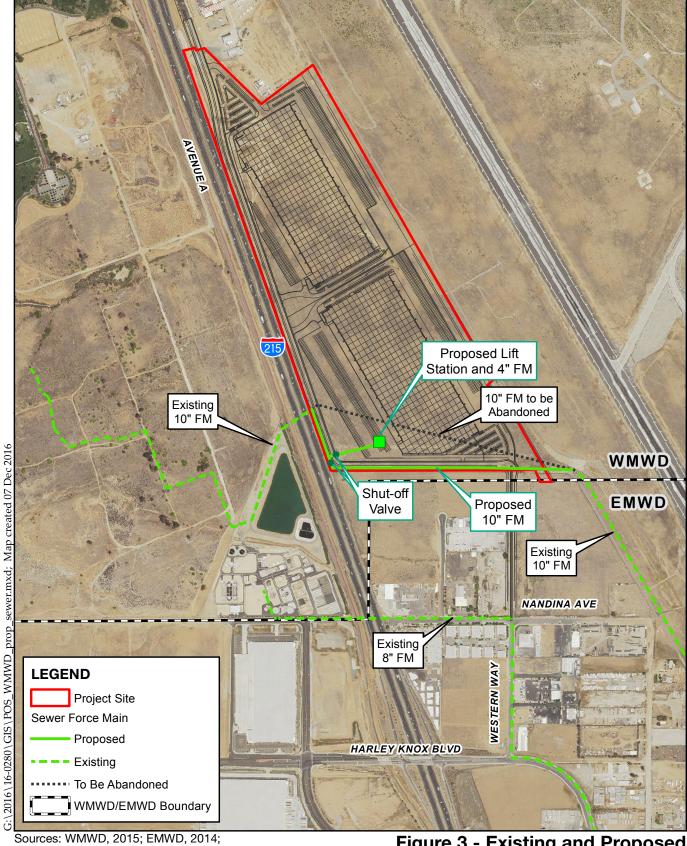
Sources: WMWD, 2015; EMWD, 2014; Riverside Co. GIS, 2016: USDA NAIP, 2014.

Figure 2 - Existing and Proposed Water Facilities

March JPA Hillwood POS



0 1,000 2,000 3,000 4,000 L L J Fee



Sources: WMWD, 2015; EMWD, 2014; Riverside Co. GIS, 2016: USDA NAIP, 2014.

Figure 3 - Existing and Proposed Sewer Facilities

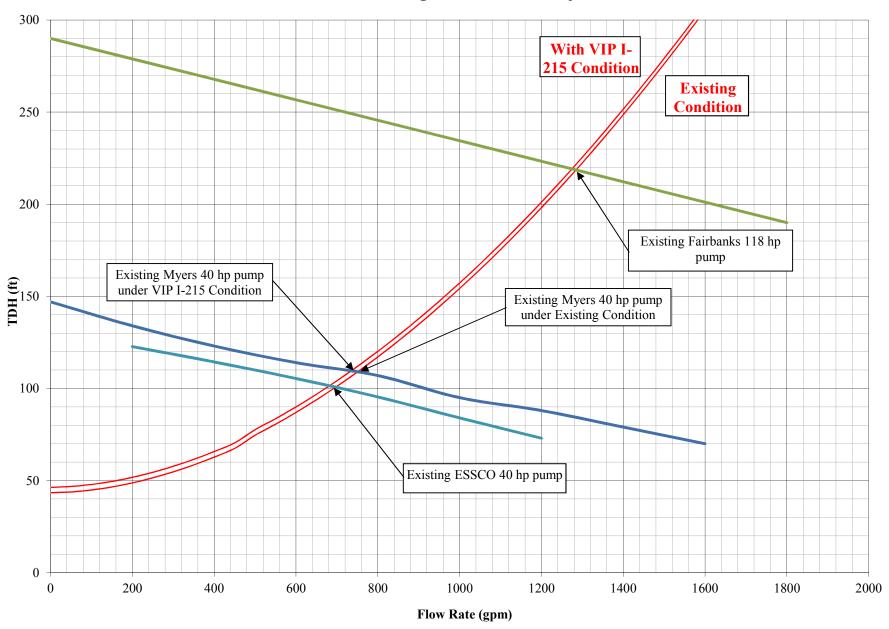
March JPA Hillwood POS



0 500 1,000 1,500 2,000

JFeet

Figure 4: System & Pump Curves Existing vs. VIP I-215 Project



Appendix A: Water Demand Summary by Jordan & Skala Engineer

Jordan & Skala Engineers

atlanta charlotte dallas houston las vegas washington

Sort Prototype 07/01/16

Domestic Water Load Summary

Domestic Water Service Size = 4" (includes future growth)

Peak Design Flow = 240 GPM

Monthly Usage = Approximately 1,200,000 Gallons

Peak load information from other similar facilities in operation for at least 12 months:

Dallas, TX - DFW7 - 1,437,820 gallons Robbinsville, NJ - EWR4 - 1,236,900 gallons Tracy, CA - OAK6 - 754,036 gallons



Appendix B: Plan of Service for Fire Flow Service submitted to EMWD



Plan of Service (Veterans Industrial Park 215)

To: Brian Raines, P.E., EMWD

From: Seungwon Won, Ph.D., P.E., Webb Associates

Date: November 30, 2016

Re: Plan of Service (POS) Fire Flow Service



Introduction

The purpose of this report is to determine and verify the adequacy of the proposed and existing water facilities to provide the fire flow service to the proposed Veterans Industrial Park 215 project (VIP I-215 project). The project site is located north of EMWD's service boundary limit; however, EMWD agreed to provide fire flow service, and WMWD agreed to provide potable water service for the proposed project. EMWD and WMWD are currently working on an inter-agency agreement for the details of interconnection, metering, operation and maintenance. The project is located in March Inland Port Authority (MIPA) approximately northeast of Nandina Avenue and I-215 and south of the existing March Field Air Museum (refer to **Figure 1** for project location).

The project site is approximately 142.5 ac in gross area and 128.0 ac in net area. The project proposes two industrial buildings that would allow for a mix of logistics center uses for wholesale, storage, distribution, manufacturing, and/or assembly centers. Building 1 would be approximately 1,017,020 S.F., and Building 2 would be 1,172,832 S.F.

Existing and Proposed Offsite Water Facilities for Fire Service

EMWD provided a hydraulic analysis for the fire flow test (**Appendix A**). The fire flow requirement is 4,000 gpm for 4 hours. The analysis assumed an 18-inch diameter pipeline from an existing 36-inch diameter pipeline in Harley-Knox Boulevard to the project site along Western Way, south side of the project site, and future Van Buren Boulevard along east of I-215. The proposed system model is consistent with the proposed pipelines as shown in **Figure 2**. The residual pressures near front of both buildings are 54.9 psi and 52.7 psi respectively. There is another project proposed at the northwest corner of Harley-Knox Boulevard and Western Way. EMWD conditioned that project to install 12-in diameter jumper connection to the existing 36-inch diameter pipeline in Harley-Knox Boulevard for service. The VIP I-215 project will need 18-inch pipeline connection instead of 12-inch diameter jumper connection. EMWD has requested that project to design an 18-inch connection in anticipation of the VIP I-215 project. A private agreement between two developers shall be prepared to upsize the pipe to 18-inch diameter pipeline.

Proposed On-site Fire Service Pipeline and Residual Pressure

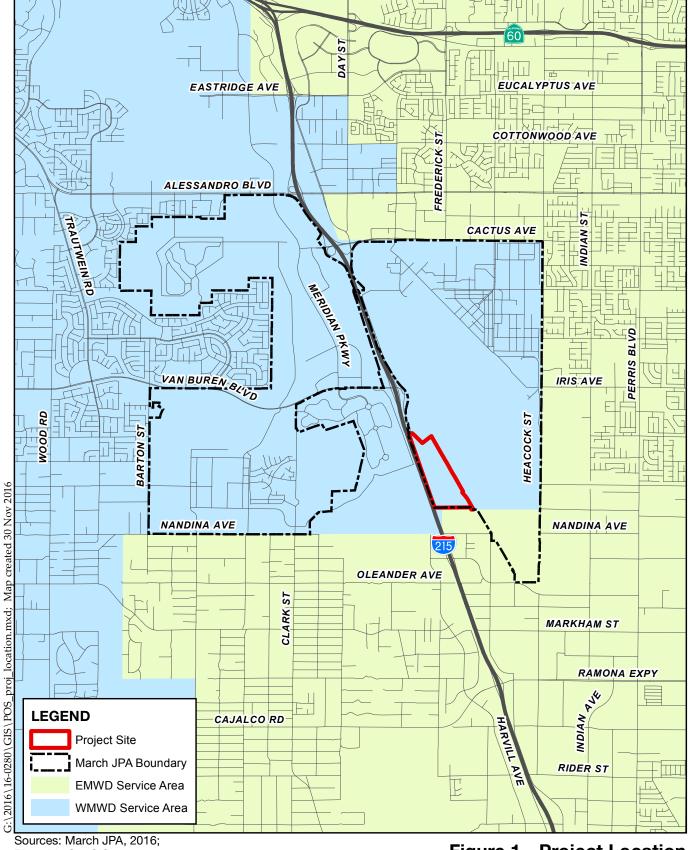
The project proposes a looped 10-inch diameter private fire service line around each building. The worst case scenario is two on-site fire hydrants operation for 4,000 gpm, each one approximately 2,000 L.F. away from the proposed public 18-inch diameter pipeline for 2,000 gpm. The friction loss for each on-

site fire hydrant is calculated to be 17.1 psi, resulting in a residual pressure of 35.6 psi, higher than 20 psi.

Inter-Agency Agreement for Interconnection

For potable water service, the project will extend the existing 12-inch diameter pipeline located near the March Field Air Museum from WMWD's existing system. The pipeline will be located on the north side of the project site and extend southeasterly along the proposed Van Buren Boulevard and tie to the proposed 18-inch diameter pipeline with a normally close valve. An 8-inch diameter water pipeline is proposed from the 12-inch diameter pipeline to serve potable water to both buildings. **Figure 2** presents the existing and proposed water facilities for both fire service from EMWD and potable water service from WMWD.

EMWD's service boundary is limited to the project's southern boundary. From the meeting with EMWD staff on November 1, 2016, an inter-agency meter is proposed at or near the northerly end of Western Way. Currently, EMWD and WMWD are preparing an inter-agency agreement to address the ownership of proposed pipelines, water transfer protocol and pricing, maintenance and operation, and other general inter-agency agreement items.



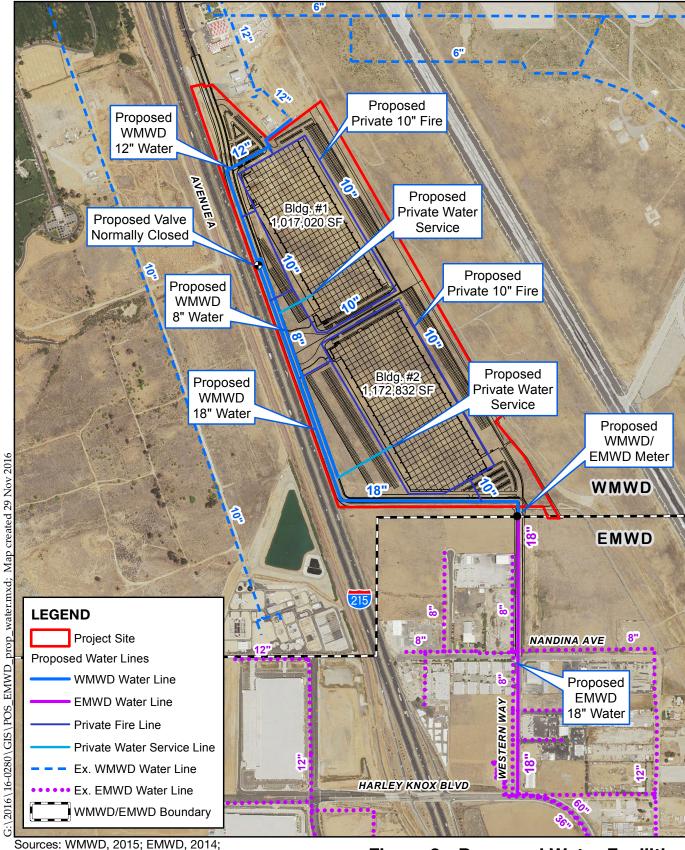
Riverside Co. GIS, 2016:

Figure 1 - Project Location

March JPA Hillwood POS







Sources: WMWD, 2015; EMWD, 2014; Riverside Co. GIS, 2016: USDA NAIP, 2014.

Figure 2 - Proposed Water Facilities

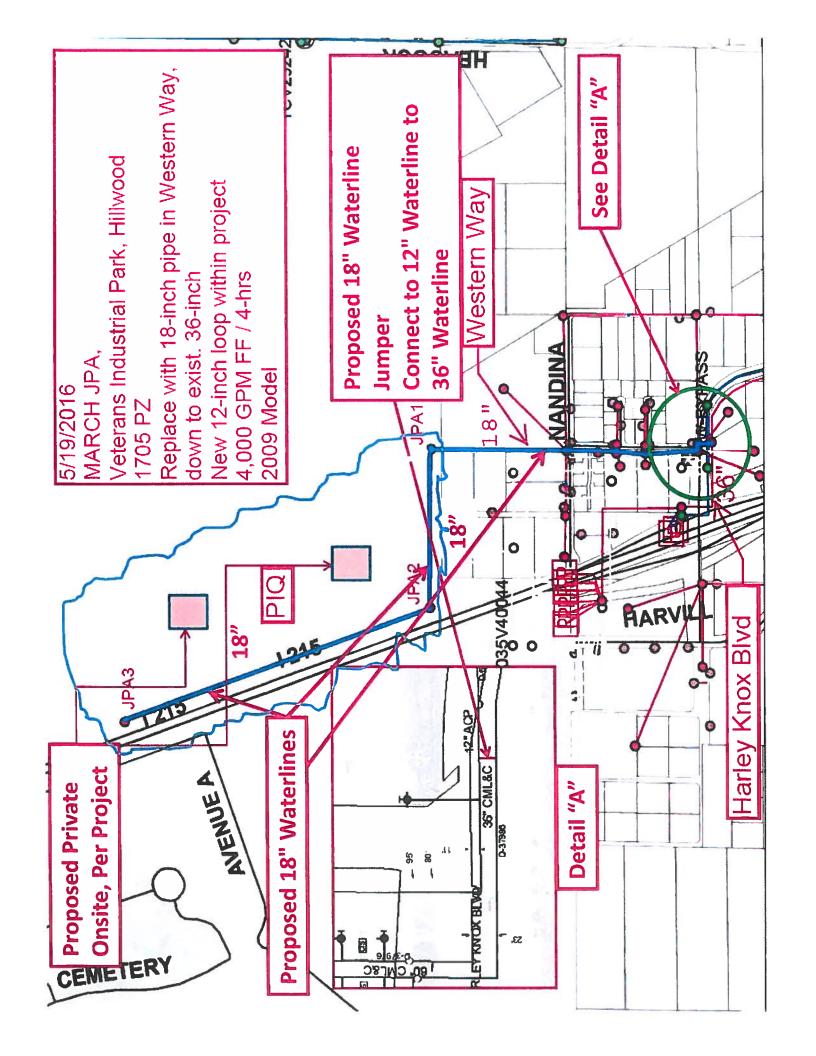
March JPA Hillwood POS

Appendix A: Fire Flow Test Results



COMPUTER MODEL TEST

	Grid Number:	54C & 49A			Date:	June 6, 2016					
	Customer Name:	Riverside Inland De	velop	ment, LLC	Address:	901 Via Piemonte, Su	uite 175				
	City, State Zip:	Ontario, CA 91764									
	Contact Name:	John M. Magness,	Senior	Vice Preside							
	Phone:	(909) 380-7157		Cell:	(949) 310-00						
	Fax:			Email:	kathy.hoffer	@hillwood.com					
Pr	roject Record Number:	WS20160000456		WO/CO:	15557	15557					
	Project Name:	March JPA D2 Site		APN:		, 294-170-005, 295-30					
(Approximate)	Test & Hydrant Location	n: Northwest area	of Na	ndina Ave &	Western Way,	See Attached Map fo	r Details				
	MODEL			EMWD M	ODEL VERSION	1 2000 JP 04.MXD					
	POC Test Locatio		EMV	D RESULTS			Flow Availability				
	TOC TEST LOCATIO	" JPA3		JPA2		Requested	<u>for Fire</u>				
	Elevation (F			1525			<u>Department</u>				
Ste	ady State, Dynamic (ps			76.22							
	Residual Pressure (ps			54.86							
	Tested FF(gpm			2000							
	Combined Total (gpn	1):		4000		4000					
	Number of Hydran		DES								
	Duration Tested	P: 4 HOUR				4 HOUR					
	Demand Condition	and the second s									
Pressure Zone	/Tank Names(s)/Level(TANK	- BASE ELEV	/ATION 1666 F						
	Pump Operating State	is: ON			Computer Model Setting EPS Reason						
Number o	I										
Points o					(Circle what A	T T					
connection (POC)	I One I Two or More	Plan of Service		ted Capacity ing Systems)	Supply Redundancy	Conditions of Approval	Fire Sprinkler Connection(s)				
	Upon installation of the					1					
	capable of providing fo										
	Proposed Private loop	_				•	-				
	Service and do not inclu	ide all facility conditi	oning	that may be	required for t	nis project. <u>No official</u>	COA's provided, if				
	any Fire Flow changes o	ccur in the COA, you	may ı	need to resu	bmit another F	ire Flow test at the re	quester's expense.				
	N	, 1445. E. 14 - 1411.									
	ts are not a guarantee t	•									
	ermined from a compu			-			-				
	elines: The capacity of the					•	* *				
the Project Spon	ered in these results. Th	e design and sizing o	or serv	ce laterals a	ind downstream	n facilities shall be the	responsibility of				
the Project Spon	1501.										
EMWD's Fire Flo	w test results are valid	for six months from	the da	te of testing							
	Rudy Esparza										
Complete	d By:										
Should you have	any questions or need	additional informati	on, ple	ase contact	me at (951) 92	8-3777, ext. 4478.					
	PS										
Sincerely,											
Rudy Esparza					Date	6-6-2016					
Sr. Engineering T	echnician				Date	0-0-016	2				
New Business De		17/				11					
	17/1	1//			Date	: 1/./1	/				
Reviewed B	By: / A	1/4				6/6/16	>				
	1/1		_			9/					



Time	00:00 hrs	01:00 hrs	02:00 hrs	03:00 hrs	04:00 hrs	05:00 hrs	00:90	07:00	08:00 hrs	09:00 hrs	10:00 hrs	11:00 hrs	12:00 hrs	13:00 hrs	14:00 hrs	15:00 hrs	16:00	17:00	18:00	19:00	20:00	21:00 hrs	22:00	23:00	24:00
a	hrs	F S	E S	5	55	55	PIS S	F S	hrs	된	5 S	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	hrs	PT-	5 5	5
Demand (gpm)	00.00	00.00	0.00	0.00	0.00	00.0	0.00	2,000.00	2,000.00	2,000.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Head (ft)	1,703.83	1,705.85	1,709.41	1,702.87	1,702.57	1,704.21	1,700.91	1,646.69	1,656.94	1,655.72	1,655.17	1,702.63	1,699.62	1,698.99	1,701.97	1,702.53	1,703.09	1,704.72	1,704.24	1,704.60	1,704.81	1,705.61	1,704.00	1,703.95	1,704.42
Pressure (psi)	77.45	78.32	79.86	77.03	76.90	77.61	76.18	52.68	57.13	56.60	56.36	76.92	75.62	75.35	76.64	76.88	77.12	77.83	77.62	77.78	77.87	78.21	77.52	77.50	77.70

Pressure (psi)	77.49	78.36	79.91	77.07	76.94	77.65	(26.22)	54.86	59.30	58.77	58.54	76.97	75.66	75.39	76.68	76.92	77.17	77.87	77.66	77.82	77.91	78.26	77.56	77.54	77.74
Head (ft)	1,703.83	1,705.85	1,709.41	1,702.87	1,702.57	1,704.21	1,700.91	1,651.61	1,661.86	1,660.64	1,660.09	1,702.63	1,699.62	1,698.99	1,701.97	1,702.53	1,703.09	1,704.72	1,704.24	1,704.60	1,704.81	1,705.61	1,704.00	1,703.95	1,704.42
Demand (gpm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00	2,000.00	2,000.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.00
Time	00:00 hrs	01:00 hrs	02:00 hrs	03:00 hrs	04:00 hrs	05:00 hrs	06:00 hrs	07:00 hrs	08:00 hrs	09:00 hrs	10:00 hrs	11:00 hrs	12:00 hrs	13:00 hrs	14:00 hrs	15:00 hrs	16:00 hrs	17:00 hrs	18:00 hrs	19:00 hrs	20:00 hrs	21:00 hrs	22:00 hrs	23:00 hrs	24:00 hrs
25	-	2	က	4	2	9	7	œ	O	10	1	12	13	14	15	16	17	9	19	20	21	22	23	24	25

Velocity (ft/s)	6.45	6.45	5.36	5.36	5.36	2.00	4.96	4.96	4.95	4.93
Q	B4159P32	B4159P22	P2705	P2693	P3328	P1552	P1635	P21742	P1625	P17800
1	-	2	က	4	2	9	7	80	G	10

Date: Monday, June 06, 2016, Time: 10:45:57, Page 1

Elevation Head Pressure (ft) (ft) (psi)	1,703.83	1,525.10 1,703.83 77.45
Demand (gpm)		00.0
Q	N41032-JPA2	N41034-JPA3
_55	-	2

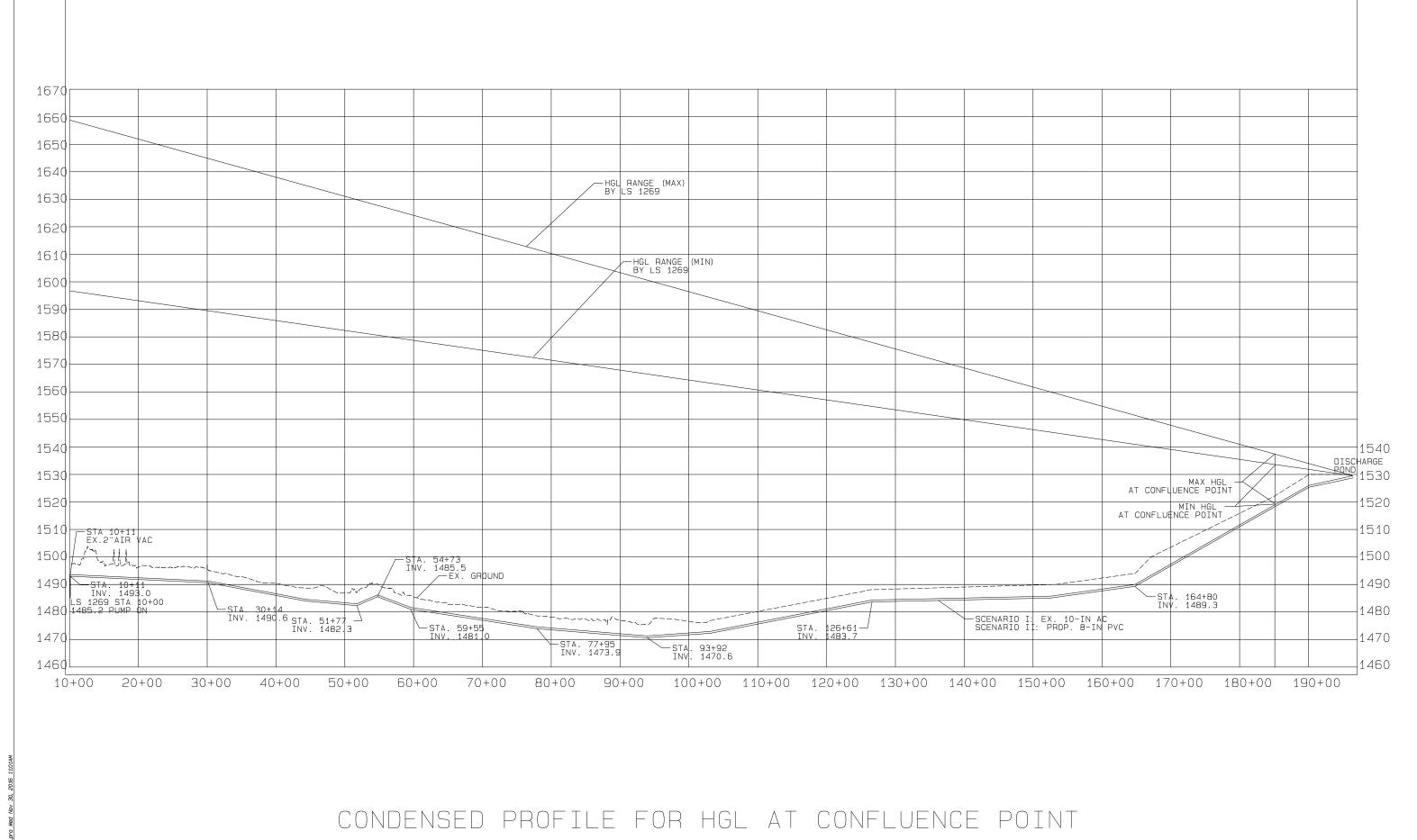
Table 2-1: Hydraulic Analysis of Each Phase

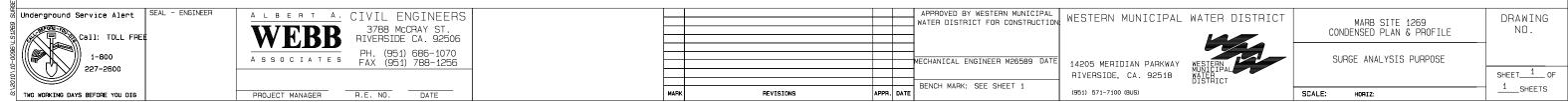
	Existing	Phase I	Phase II	Phase III (Ultimate)
Influx Peak Flow Rate	500 gpm	Up to 760 gpm	1,100 gpm	1,840 gpm
Discharge Flow Rate (One pump on)	760 gpm	760 gpm	1,100 gpm	1,840 gpm
Pressure at Discharge	47.6 psi	47.6 psi	75 psi	95 psi
Velocity (10-in dia.)	3.6 fps	3.6 fps	4.5 fps	-
(12-in dia.)	-	-	-	5.2 fps
Turn on/off under Existing Wetwell	5.84/hr	4.8/hr	-	-
Turn on/off under Proposed Wetwell	-	-	4.8/hr	5.4/hr
Wetwell Size	15.5-ft(L) x 7.5-ft (W) x 15-ft (D)	15.5-ft(L) x 7.5-ft (W) x 15-ft (D)	15.5-ft(L) x 8.5-ft (W) x 18-ft (D)	15.5-ft(L) x 8.5-ft (W) x 18-ft (D)
Pump Selection	(2) 40 hp + (1) 118 hp	(2) 40 hp + (1) 118 hp	(2) 75 hp + (1) 118 hp	(2) 150 hp
Stand-by Genset	190 kW	190 kW	235 kW	350 kW

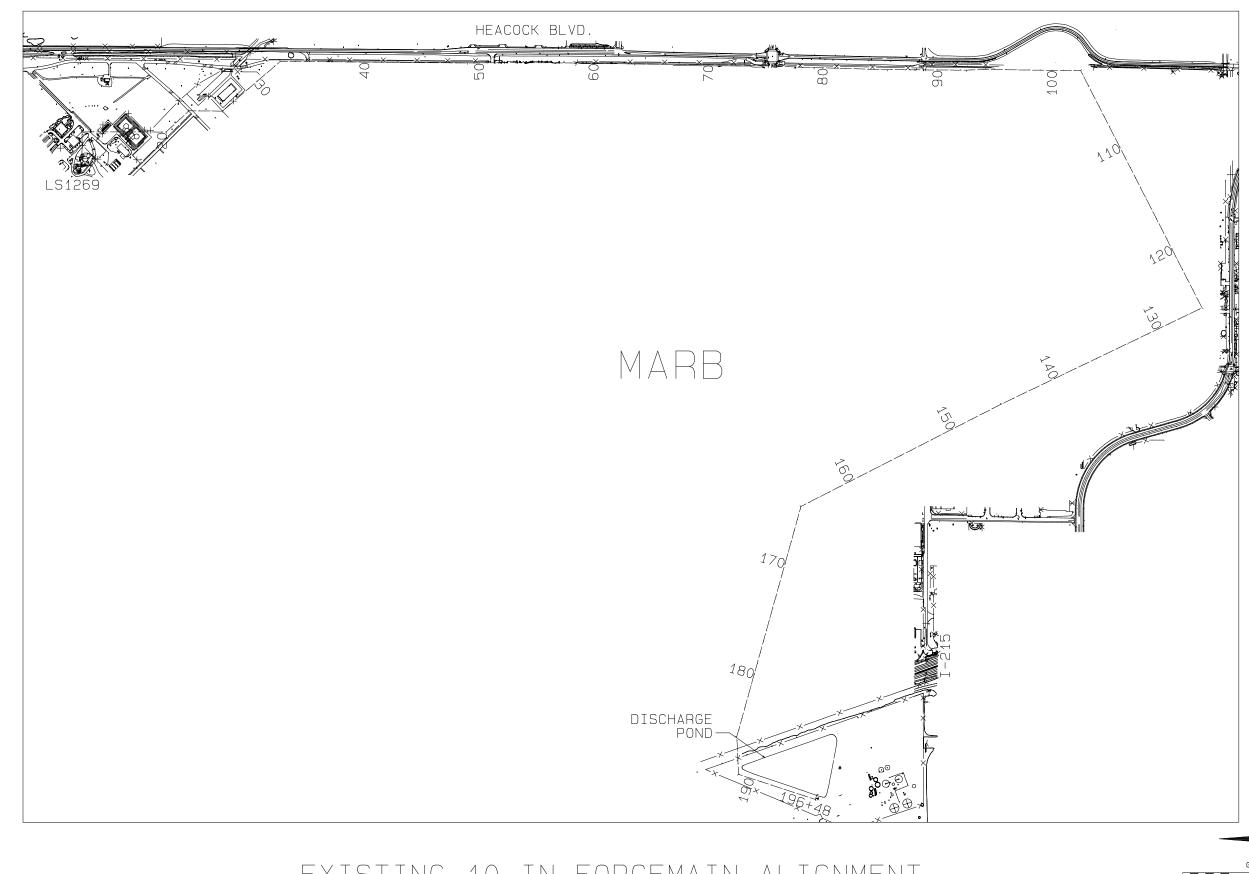
Bold letter items represent limit of the sewer system of each phase. See Appendix A for Hydraulic Analysis.

Appendix C: Hydraulic Conditions

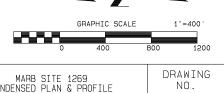
Appendix D: An Example of Private Lift Station Design Package and Pump Selection







EXISTING 10-IN FORCEMAIN ALIGNMENT



Underground Service Alert Call: TOLL FREE 227-2600

A L B E R T A. CIVIL ENGINEERS WEBB 3788 MCCRAY ST. RIVERSIDE CA. 92506

PROJECT MANAGER R.E. NO. DATE

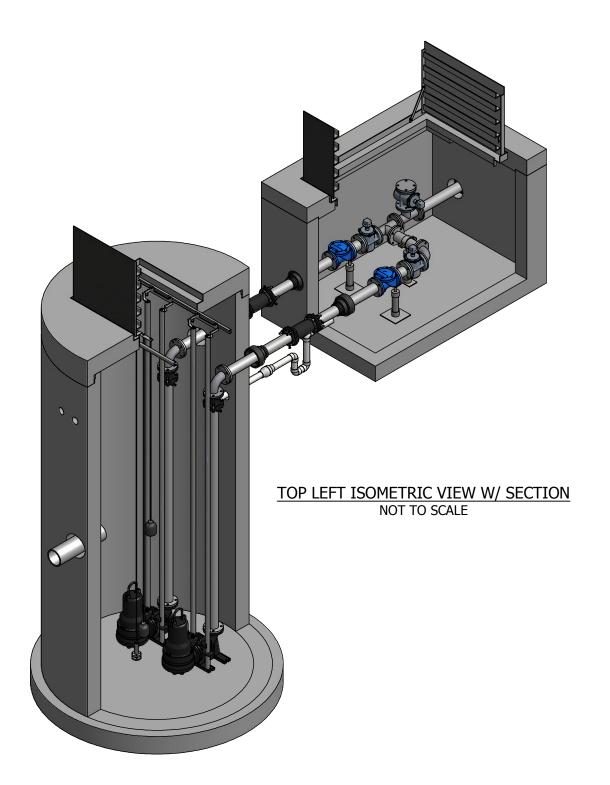
APPROVED BY WESTERN MUNICIPAL WATER DISTRICT FOR CONSTRUCTION WESTERN MUNICIPAL WATER DISTRICT MECHANICAL ENGINEER M26589 DATE BENCH MARK: SEE SHEET 1 APPR. DATE REVISIONS

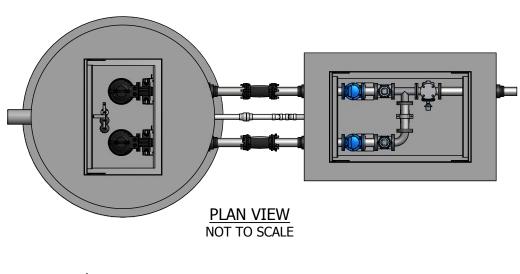
14205 MERIDIAN PARKWAY RIVERSIDE, CA. 92518 (951) 571-7100 (BUS) SCALE:

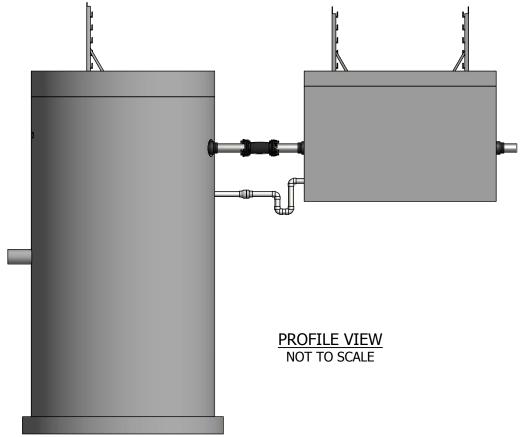
MARB SITE 1269 CONDENSED PLAN & PROFILE SURGE ANALYSIS PURPOSE

SHEET___1__OF _1__SHEETS

3" DISCHARGE STANDARD **DUPLEX LIFT STATION**







DISCLAIMERS, INCLUDING BUT NOT LIMITED TO:

- 1.) Elevations provided by others. Changes greater than 0.1' require engineer approval. Field elevations have not been verified by Jensen Precast. Refer to Jensen Precast concrete production drawings for concrete excavation. These mechanical drawings are not intended for setting of precast structures.
- 2.) Pump station design characteristics such as, but not limited to; inflow rate, on-site power availability, etc., were provided by the engineer of record.
 3.) Purchasing agent must verify pump station complies with engineering plans, specifications, and site conditions prior to production.
- 4.) Site assembly required. Purchasing agent is responsible for assembly of entire pump station. Includes but is not limited to; off-loading & setting of concrete material, piping assembly, and
- 5.) Location of control panel must be disclosed to Jensen Precast.

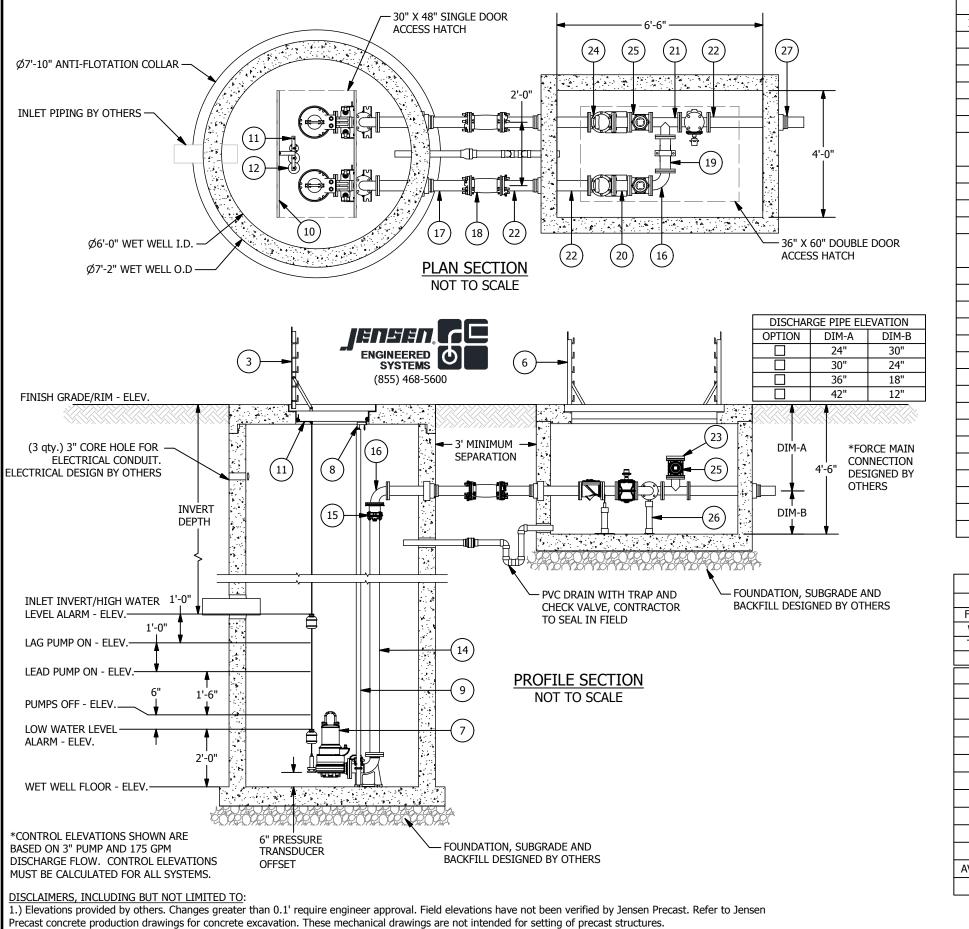
3" DISCHARGE LIFT STATION

TITLE PAGE

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ENGINEERED SYSTEMS 521 DUNN CIRCLE, SPARKS, NV 89431

senEngineeredSystems.com (855) 468-5600



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- 4.) Site assembly required. Purchasing agent is responsible for assembly of entire pump station. Includes but is not limited to; off-loading & setting of concrete material, piping assembly, and electrical wiring.
- 5.) Location of control panel must be disclosed to Jensen Precast.

ITEM QTY DESCRIPTION 1 1 72" DIA JENSEN PRECAST CONCRETE MANHOLE 2 1 72" DIA JENSEN PRECAST CONCRETE FLAT TOP 3 1 30" X 48" ALUMINUM OR STEEL SINGLE DOOR ACCESS HATCH TO MEET LOADING CRITERIA 4 1 48" X 78" JENSEN PRECAST CONCRETE VAULT BASE 5 1 48" X 78" JENSEN PRECAST CONCRETE VAULT BASE 6 1 36" X 60" ALUMINUM OR STEEL DOUBLE DOOR ACCESS HATCH TO MEET LOADING CRITERIA 7 2 3" NON-CLOG SUBMERSIBLE PUMP W/ AUTOCOUPLING RATED FOR CONTINUOUS DUTY, INCLUDES SEAL FAILURE AND THERMAL SENSORS 8 2 UPPER GUIDE RAIL BRACKET PER MANUFACTURER DESIGN 9 4 304SS GUIDE RAIL 10 2 UNISTRUT CHANNEL 11 1 SS FLOAT BRACKET W/ CORD GRIPS 12 2 INTERNALLY WEIGHTED NON-MECURY MECHANICAL FLOAT BACK-UP FOR REDUNDANT HIGH/LOW LEVEL CONDITION 13 1 DWYER PBLT SERIES STAINLESS STEEL, SUBMERSIBLE PRESSURE TRANSDUCER 14 2 3" DIP FLG X PE SPOOL PER DESIGN LENGTH 15 2 3" RESTRAINED FLANGE COUPLING ADAPTER W/ SS HARDWARE BY ROMAC 16 3 3" DIP FLG X FLG 90 DEGREE ELBOW 17 2 3" DIP FLG X FLG 90 DEGREE ELBOW 17 2 3" DIP FLG X FLG SPOOL 1-1" 20 2 3" DIP FLG X FLG SPOOL 1-1" 20 2 3" DIP FLG X FLG SPOOL 1-1" 21 2 3" DIP FLG X FLG SPOOL 1-1" 22 3" DIP FLG X FLG SPOOL 1-1" 23 3" DIP FLG X FLG SPOOL 1-1" 24 2 3" DIP FLG X FLG SPOOL 1-1" 25 3 3" DIP FLG X FLG SPOOL 1-1" 26 3 3" DIP FLG X FLG SPOOL 1-1" 27 3" DIP FLG X FLG SPOOL 1-1" 28 3 3" DIP FLG X FLG SPOOL 1-1" 29 3" DIP FLG X FLG SPOOL 1-1" 20 2 3" DIP FLG X FLG SPOOL 1-1" 21 2 3" DIP FLG X FLG SPOOL 1-1" 22 3" DIP FLG X FLG SPOOL 1-1" 23 3" DIP FLG X FLG SPOOL 1-1" 24 2 3" DIP FLG X FLG SPOOL 1-1" 25 3 3" DIP FLG X FLG SPOOL 1-1" 26 3 3" DIP FLG X FLG SPOOL 1-1" 27 4 6 FLEXIBLE BOOT TYPE PIPE CONNECTOR 28 1 2" SCH40 PVC DRAIN PIPE W/ CHECK VALVE			PARTS LIST
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	26	3	ADJUSTABLE PIPE STAND FOR 3" DIP
28 1 2" SCH40 PVC DRAIN PIPE W/ CHECK VALVE	27	6	FLEXIBLE BOOT TYPE PIPE CONNECTOR
	28	1	2" SCH40 PVC DRAIN PIPE W/ CHECK VALVE

		ı
PROJECT SPECIFIC EI		
DESCRIPTION	VALUE (ft)	
FINISH GRADE/RIM ELEV.		ŀ
WET WELL FLOOR ELEV.		ıl
TOTAL MANHOLE DEPTH		ıl
INVERT (IN) DEPTH		ŀ
SYSTEM CHARACT	ERISTICS	١
DESCRIPTION	VALUE	ı
DESIGN FLOW	gpm	١
STATIC HEAD	ft	ا
TOTAL DYNAMIC HEAD	ft	اا
FORCE MAIN LENGTH	ft	اا
MANUFACTURER	HOMA	اا
(SELECT ONLY ONE)	ABS	
	GRUNDFOS	اا
MOTOR SIZE	Нр	
FULL LOAD AMPS	A	
AVAILABLE POWER SUPPLY	_ PHASE V	اا
NUMBER OF PUMPS		

ACCESSORIES AND ADDITIONAL OPTIONS	
SEWAGE APPLICATION REQUIRING FM (CLASS1/DIVISION L) EXPLOSION PROOF PUMPS	
SEWAGE APPLICATION - DURA PLATE (PVC CORROSION PROTECTION LINER) BY A-LOK	
DOOR CONTROL FOR SEWAGE APPLICATION, 1800 SERIES MEDIA CANISTER FILTER BY WAGER	
ACCESS COVER LOADING CRITERIA (SPECIFY ONLY ONE)	
PEDESTRIAN LOADING (pedestrian, non-vehicular, uniform 800 lbs/sq.ft. live load)	
NCIDENTAL H-20 LOADING (off street, sidewalk, and low speed, non-impact areas of parking lots, 16,000 lbs./sq.ft. lual wheel live load, 0% impact)	
1-20 FULL TRAFFIC LOADING (in street, 16,000 lbs./sq.ft. lual wheel live load, 30% impact)	
H-20-44 PARKING LOT LOADING (parking lots and alley ways where speed does not exceed 15 mph)	

PROJECT:

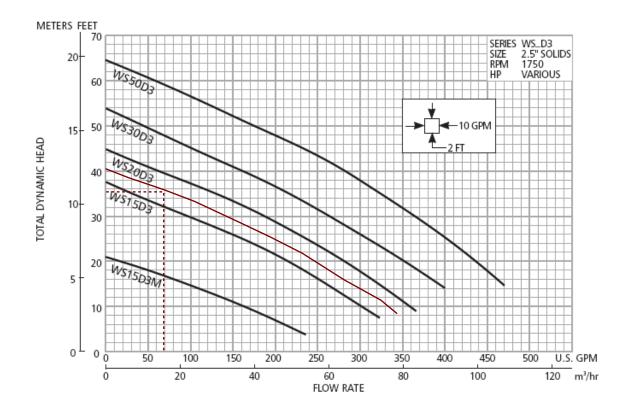
April 2014

3" DISCHARGE LIFT STATION MECHANICAL DETAIL

ENGINEERED SYSTEMS

521 DUNN CIRCLE, SPARKS, NV 89431 HEET NO: nEngineeredSystems.coi (855) 468-5600 2 of 2

PUMPS



WS_D4 Series (Model 3888D4): Capacity: 620 GPM; TOTAL HEADS: Up to 60 Feet, Discharge: 4" ANSI 125# flanged, Maximum solid size 3".

Applications: Sewage systems, Flood and pollution control, Dewatering/Effluent.



DESCRIPTION	PART NUMBER
SEWAGE SUBMERSIBLE 11/2 HP 3 PH 460V	WS1534D4
SEWAGE SUBMERSIBLE 2 HP 1 PH 230V	WS2012D4
SEWAGE SUBMERSIBLE 3 HP 3 PH 230V	WS3032D4
SEWAGE SUBMERSIBLE 3 HP 3 PH 460V	WS3034D4

96

ACE PUMP AND SUPPLY

6013 JOHNSON STREET, 16600 NW 54 AVE, BAY 1 HOLLYWOOD, FL-33024 MIAMI, FL-33014 PHONE: 954-981-7424 PHONE: 305-621-0020 FAX: 954-963-2289 FAX: 305-621-9278 13500 SW 128 STREET, BAY 102 MIAMI, FL-33186 PHONE: 786-573-1 FAX: 786-573-17

-33186 -573-1 173-17 Input

L-2 Utilities and Public Services Response Letters



May 2, 2017

Jeff Smith, Senior Planner March Joint Powers Authority 14205 Meridian Parkway, Suite 140 Riverside, CA 92518

Subject: Veterans Industrial Park 215 Utilities and Public Services Response Letters

The purpose of this letter is to provide a summary of utility and public services information gathered by Kimley-Horn on behalf of the Veterans Industrial Park 215 project. The Veterans Industrial Park 215 (proposed project) proposes two speculative industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. Building 1 would be 1,017,020 square feet and Building 2 would be 1,172,832 square feet. Both buildings would be located on approximately 142.5 acres within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California.

On October 13, 2016, Kimley-Horn sent letters to providers of utilities and public services that would service the proposed project. The letters included a description of the proposed project, a project location map and a questionnaire regarding the current and future status of the associated facilities.

The providers contacted included:

- March Field Fire Department
- 452 Security Forces Law Enforcement Desk
- Riverside County Department of Waste Resources
- Eastern Municipal Water District
- Western Municipal Water District

Kimley-Horn received responses from Western Municipal Water District, Eastern Municipal Water District, and Riverside County Department of Waste Resources. Responses were not received from the March Field Fire Department or 452 Security Forces Law Enforcement Desk.

Kimley-Horn received a response letter from Western Municipal Water District (WMWD) on November 22, 2016, sent by Thomas W. Thornton, P.E. a Principal Engineer with the WMWD. The response letter stated that the proposed project would be located within the WMWD service area and that WMWD can provide domestic water service to the proposed project through an Interagency Agreement with EMWD. The WMWD stated that current fire flow requirements cannot be met by WMWD's existing system, thus the project developer and WMWD are seeking a separate Interagency Agreement with EMWD to provide the required fire flow.



Further responses to the questionnaire concluded that WMWD could provide domestic service to the proposed project with offsite upgrades. WMWD assumed a warehouse type use in order to determine the domestic water demands of the proposed project; however, fire flow factors are set by the Riverside County Fire department which requires 4,000 gallons per minute (gpm) at a 20 pound-force per square inch (psi) residual.

WMWD found that the proposed project would adversely affect their services and facilities including the need to construct an 18-inch waterline in Western Way as well as offsite improvements to connect to the WMWD 1695 Pressure Zone. Additionally, as discussed above, WMWD would require an Interagency Agreement with EMWD in order to provide the necessary fire flow for the proposed project. Furthermore, WMWD would also be providing sewer service to the proposed project which would also require offsite improvements. In order to reduce potential adverse impacts to WMWD services and facilities, WMWD recommends conformance with the proposed Interagency Agreement between WMWD and EMWD and conformance with future WMWD offsite conditions of approval. WMWD determined that the proposed project would be subject to special fees, which would be determined as a part of the forthcoming Interagency Agreement with EMWD. The proposed project would also be subject to Water Capacity fees for the March East Area approved by the WMWD Board of Director's in April 20, 2016.

Kimley-Horn received a response letter from EMWD on October 28, 2016. The letter was sent by Maroun El-Hage, M.S., P.E., a Senior Civil Engineer with the EMWD New Business Department. The letter included responses to the water questionnaire and a Fire Flow Test Report dated June 6, 2016.

The EMWD response letter reiterated that the proposed project requires an Interagency Agreement between WMWD and EMWD. The details of the service connection points would be further detailed in a separate document, known as EMWD's Plan of Service (POS), to be developed by the project proponent and approved by EMWD. The POS evaluation would identify the potential requirement to construct new facilities, such as on-site and offsite water, as well as associated easements and/or Right-of-Way permits to adequately serve the project demands.

In response to the questionnaire, EMWD affirmed that they would not be providing water services for domestic demand, but would be providing primary fire flow for the proposed project. Furthermore, EMWD found that the proposed project would adversely affect service capabilities, which would require the proposed project to construct an 18-inch water pipeline in Western Way, as shown in the Fire Flow Test Report. EMWD's 1705 Pressure Zone would provide sufficient fire flow water supply to serve the proposed project. The response letter also noted that the proposed project would be subject to special fees which are yet to be determined, but would be developed and included in the forthcoming Interagency Agreement between EMWD and WMWD. The proposed project could also be subject to additional Plan Check and inspection costs. EMWD recommended mitigation to reduce potential adverse impacts to services and facilities including conformance with the terms of the Interagency Agreement and the project's POS.

Kimley-Horn received a response letter from the Riverside County Department of Waste Resources (RCDWR) on December 5, 2016. The response letter was sent by Jose L. Merlan, an Urban/Regional



Planner II with the RCDWR. The responses provided by the RCDWR stated that the proposed project would be served primarily by the Badlands, Lamb Canyon and El Sobrante landfill. Waste Management Inc. would be the franchise waste hauler for the project site.

RCDWR assessed solid waste impacts and calculated the projected maximum amount of waste generated at build-out of the project using waste generation factors available at the CalRecycle website: www.calrecycle.ca.gov/wastechar/wastegenrates.
Based on those generation rates, RCDWR determined that all three of the Western Riverside landfills that could potentially receive waste from the proposed project have capacity; Badlands has capacity through 2022, Lamb Canyon has capacity through 2029 and El Sobrante has capacity through 2057. The proposed project's waste disposal needs can be met by existing landfill capacity at Riverside County landfills. The State requires that each County provide more than 15 years of waste disposal capacity. The three existing landfills in Western Riverside County provide more than 15 years of waste disposal capacity to the entire County of Riverside; therefore no additional solid waste facilities or infrastructure would be required to serve the proposed project.

The proposed project would not be subject to development fees associated with waste removal. However; the RCDWR stated concern for the potential of the proposed project to generate construction and demolition waste in excess of the landfill's daily permitted capacity. In order to reduce that potential adverse impact to RCDWR's services and facilities, RCDWR recommends a mitigation measure ensuring the proposed project comply with California Assembly Bill (AB) 939:

- a. Prior to issuance of building permits, a Waste Recycling Plan (WRP) shall be submitted to the Riverside County Department of Waste Resources for approval. At a minimum, the WRP must identify the materials (i.e., concrete, asphalt, wood, etc.) that will be generated by construction and development, the projected amounts, the measures/methods that will be taken to recycle, reuse, and/or reduce the amount of materials, the facilities and/or haulers that will be utilized, and the targeted recycling or reduction rate. During project construction, the project site shall have, at a minimum, two (2) bins: one for waste disposal and the other for the recycling of Construction and Demolition (C&D) materials. Additional bins are encouraged to be used for further source separation of C&D recyclable materials. Accurate record keeping (receipts) for recycling of C&D recyclable materials and solid waste disposal must be kept. Arrangements can be made through the franchise hauler.
- b. Prior to issuance of occupancy permits, evidence (i.e., receipts or other type of verification) to demonstrate project compliance with the approved WRP shall be presented by the project proponent to the Planning Division of the Riverside County Department of Waste Resources.
- c. Prior to issuance of a building permit, the applicant shall submit three (3) copies of a Recyclables Collection and Loading Area plot plan to the Riverside County Department of Waste Resources for review and approval. The plot plan shall conform to Design Guidelines for Recyclables Collection and Loading Areas, provided by the Department of Waste



Resources, and shall show the location of and access to the collection area for recyclable materials, along with its dimensions and construction detail, including elevation/facade, construction materials and signage. The plot plan shall clearly indicate how the trash and recycling enclosures shall be accessed by the hauler.

d. Prior to final building inspection, the applicant shall construct the recyclables collection and loading area in compliance with the Recyclables Collection and Loading Area plot plans, as approved and stamped by the Riverside County Department of Waste Resources.

RCDWR also noted that hazardous materials are not accepted at Riverside County landfills. In compliance with federal, state, and local regulations and ordinances, any hazardous waste generated in association with the project (including paint, batteries, oil, asbestos, and solvents) shall be disposed of at a permitted Hazardous Waste disposal facility.

Thank you for the opportunity to provide this documentation to the March Joint Powers Authority for the Veterans Industrial Park 215 project. If you have any questions or comments, or require additional information, please contact me at (619) 744-0138 or via email at Karina.Fidler@kimley-horn.com.

Sincerely,

Karina Fidler, AICP

Kimley-Horn and Associates

Enclosures: WMWD Response Letter and Attachments

EMWD Response Letter and Attachments RCDWR Response Letter and Attachments

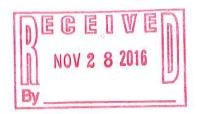
John V. Rossi General Manager

Robert Stockton Division 1 Thomas P. Evans Division 2 Brenda Dennstedt Division 3 Donald D. Galleano Division 4 S.R. "Al" Lopez Division 5



Securing Your Water Supply

November 22, 2016



Ms. Karina Fidler, AICP Kimley-Horn and Associates 401 B Street, Suite 600 San Diego, CA 92101

VETERANS INDUSTRIAL PARK 215 ENVIRONMENTAL IMPACT REPORT; APNs 294-150-009,294-170-005,295-300-008,294-180-038

Per your request, attached please find the completed Water Services/Facilities Questionnaire that your office provided. The subject project is located within Western Municipal Water District's (Western) service area. Western is capable of providing domestic water service to the proposed project through an existing interagency agreement with Eastern Municipal Water District (EMWD). Fire flow requirements currently cannot be met by Western's existing system. The developer has proposed creating a separate inter-agency agreement with EMWD to provide the required fire flow.

The project is also subject to Western's current Water Capacity Fees for the March East Area.

Should you have any questions, please contact me at (951) 571-7293.

THOMAS W. THORNTON, P.E.

flower. It

Principal Engineer

TWT:sc

Attachment: Water Services/Facilities Questionnaire

WATER SERVICES/FACILITIES QUESTIONNAIRE

1.	Please identify the locations and types of existing and planned water facilities within the project area which would serve the proposed project. The proposed project is within the Western Municipal Water District service area. Domestic service is available with some offsite upgrades to be determined. Fire Flow demands are proposed to be provided by Eastern Municipal Water District through an Interagency Agreement as Western's system currently cannot provide the required fire flow (4000 gpm).
2.	Please identify the appropriate water consumption factors to be used in determining the demands of the project. Primary fire flow is set by the Riverside County Fire Department. Currently the project is required to have 4000 gpm at a 20 psi residual. Domestic consumption factors will be based on a warehouse type use and have yet to be determined.
3.	Would the implementation of the proposed project adversely affect your service capabilities or facilities in the project area? Yes. The project will be required to construct an 18" waterline in Western Way. Fire flow supply is available from the Eastern Municipal Water Districts 1705 Pressure Zone. Domestic offsite improvements will connect to the Western Municipal Water District's 1695 Pressure Zone. Details off the domestic system have yet to be determined.
4.	Please explain where expansion of new water facilities or existing lines would take place if such action is needed due to the implementation of the proposed project. See question 3 response.

5.	Would sufficient water supplied be available to serve the project, or would new/expanded entitlements be needed? Sufficient Fire Flow supply is available from Eastern Municipal Water Districts 1705 Pressure Zone. Sufficient Domestic Supply is available from the Western Municipal Water District service area with the appropriate offsite water main extensions that are yet to be determined.
6.	Please identify any existing development fees applicable to the project. This project is subject to special fees, yet to be determined in an Inter-Agency Agreement which is currently being developed between WMWD and EMWD. This project is also subject to Water Capacity fees that were approved by the WMWD Board of Director's on April 20th, 2016 for the March East Area.
7.	Please recommend mitigation measures to reduce potential adverse impacts to your services or facilities. Conformance with the proposed Interagency Agreement between Western Municipal Water District and Eastern Municipal Water District and future offsite conditions of approval for domestic water by Western Municipal Water District.
	8. Please identify any other issues that you think should be addressed in the Environmental Impact Report related water services. It should be noted that Western Municipal Water District is also the sewer service provider to the proposed project and offsite upgrades will also be required to provide sewer service.



October 28, 2016

Ms. Karina Fidler, AICP Kimley Horn 401 B Street, Suite 600 San Diego, CA 92101

Subject: Veterans Industrial Park 215 Environmental Impact Report APNS: 294-150-009, 294-170-005, 295-300-008, 294-180-038

Dear Ms. Karina Fidler:

The subject project requires water service from EMWD through an Inter-Agency Agreement between Western Municipal Water District and EMWD. The details of said service connection points will be further detailed in a separate document, known as EMWD's Plan of Service (POS), to be developed by the project proponent and approved by EMWD.

The POS evaluation will identify the potential requirement to construct new facilities, such as on-site and offsite water, as well as associated easements and/or Right-of-Way Permits to adequately serve the project demands.

The subject project is an active project with EMWD's New Business Department, with a water service Work Order Number 15556 and Project Record Number WS2016-294.

To date, a final POS has not been completed to identify on-site and offsite facilities required to serve this project, and the Inter-Agency Agreement is currently being drafted.

Attached, please find EMWD's responses to the "Water Services/Facilities Questionnaire".

If you have questions or concerns, please do not hesitate to contact me at (951) 928-3777, extension 4468 or by e-mail at <u>El-hagem@emwd.org</u>.

Sincerely,

Maroun El-Hage, M.S., P.E.

Senior Civil Engineer

New Business Department

Eastern Municipal Water District

ME:emn

Attachments

WATER SERVICES/FACILITIES **QUESTIONNAIRE**

1. Please identify the locations and types of existing and planned water facilities within the project area which would serve the proposed project.

see Fire Flow test results sent to Webb associates (attached)

2. Please identify the appropriate water consumption factors to be used in determining the demands of the project.

No domestic demands Primary Fire Flow supply of 4,000 gpm, for 4-hrs

3. Would the implementation of the proposed project adversely affect your service capabilities or facilities in the project area? If so, please describe.

yes, the project is responsible to construct an 18" water pipe line in Western Way, as shown in the Fire Flow test report.

Fire Flow supply is available from EMWD's 1705 Pressure Zone.

4. Please explain where expansion of new water facilities or existing lines would take place if such action is needed due to the implementation of the proposed project.

same answer as in question 3 above.

5. Would sufficient water supplied be available to serve the project, or would new/expanded entitlements be needed?

Fire Flow supply is available from EMWD's 1705 Pressure Zone.

6. Please identify any existing development fees applicable to the project.

This project is subject to special fees, yet to be determined in an Inter Agency Agreement, which is currently being developed between EMWD and WMWD. Additional charges may include Plan Check and Inspections

7. Please recommend mitigation measures to reduce potential adverse impacts to your services or

Conformance with terms of the Inter Agency Agreement and the project's Plan Of Service.

8. Please identify any other issues that you think should be addressed in the Environmental Impact Report related water services.

None at this time.

Sewer service is not being evaluated or considered as part of the on-going Plan Of Service: The customer is encouraged to seek alternative measures for service.

Thank you for your assistance. Please return completed questionnaire to:

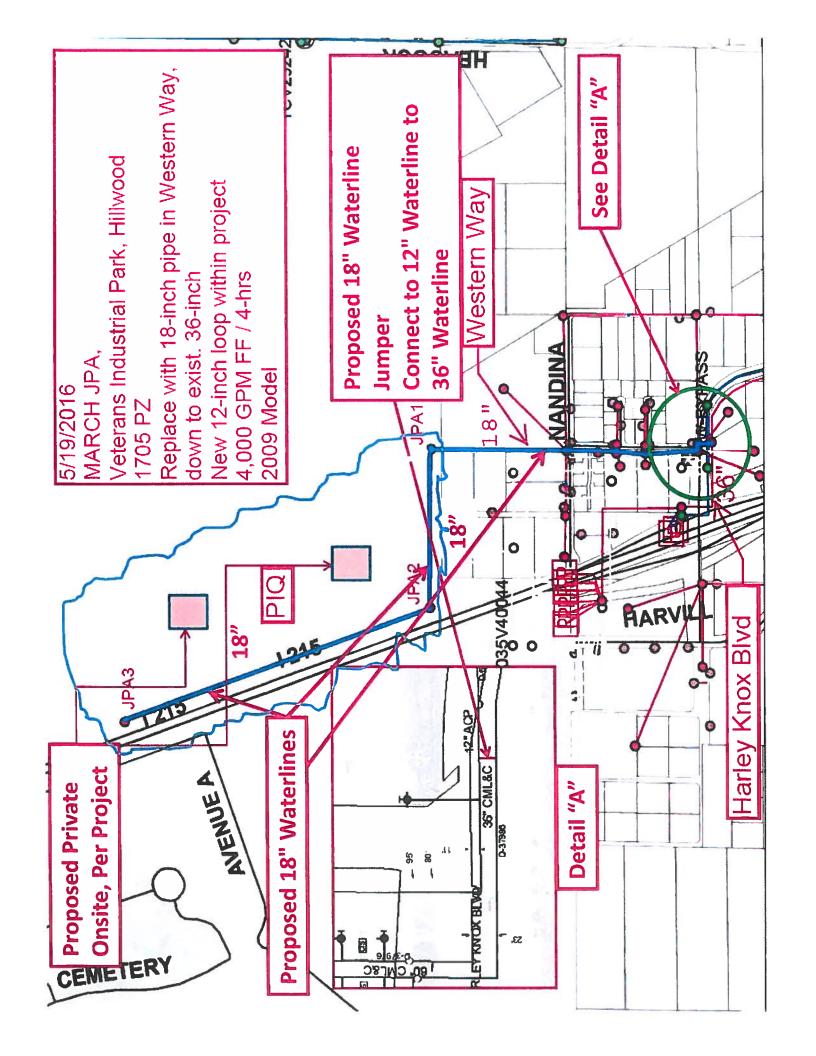
Kimley-Horn and Associates Attn: Karina Fidler 401 B Street, Suite 600 San Diego, CA 92101

Or email to Karina.Fidler@kimley-horn.com



COMPUTER MODEL TEST

	Grid Number:	54C & 49A			Date: June 6, 2016							
	Customer Name:		erside Inland Development, LLC Address: 901 Via Piemonte, Suite 175									
	City, State Zip:	Ontario, CA 91764										
	Contact Name:	John M. Magness,	Senior	Vice Preside								
	Phone:	(909) 380-7157		Cell:								
	Fax:			Email:	kathy.hoffer@hillwood.com							
Pro	ject Record Number:	WS20160000456		WO/CO:	15557							
	Project Name:	March JPA D2 Site	Warch JPA D2 Site APN: 294-150-009, 294-170-005, 295-300-00									
(Approximate) T	est & Hydrant Locatio	Northwest area of Nandina Ave & Western Way, See Attached Map for Details										
1	MODEL	EMWD MODEL VERSION 2000 JP 04.MXD										
	POC Test Location		EMV	D RESULTS			Flow Availability					
	POC TEST LUCATION	JPA3		JPA2		Requested	<u>for Fire</u>					
	Elevation (Ft			1525			<u>Department</u>					
	dy State, Dynamic (psi			76.22								
	Residual Pressure (psi			54.86								
	Tested FF(gpm)			2000								
	Combined Total (gpm):		4000		4000						
	Number of Hydrant		DES									
	Duration Tested @	: 4 HOUR				4 HOUR						
	Demand Condition	s: MAX DAY										
	Tank Names(s)/Level(s											
	Pump Operating Statu											
Number of	POC				Reason							
Points of	(Circle One)	(Circle what Applies)										
connections (POC):	One Two or More	Plan of Service		ted Capacity ting Systems)	Supply Redundance	Conditions of Approval	Fire Sprinkler Connection(s)					
	pon installation of the					1						
	pable of providing for											
	roposed Private loop C	_				•	•					
	ervice and do not inclu				•	•	•					
	ny Fire Flow changes o	•	_	•	•							
The above results	are not a guarantee th	e District's system v	vill sup	ply water to	the project at	any specific flows or	pressures. These					
results were deter	mined from a comput	er simulation of the	Distric	t's water sy:	stem and/or fr	om hydraulic calculati	ons pertaining to					
	nes: The capacity of th											
	ed in these results. Th	e design and sizing o	of servi	ice laterals a	nd downstread	n facilities shall be the	responsibility of					
the Project Sponse	or.											
EMMD's Eiro Eige	test results are valid f	or siv months from	the de	ta of tarting								
FINIAND 2 LILE LIOM	Rudy Esparza	OF SIX HIGHLING FROM	ine Qă	re or restring	•							
Completed												
23111618188												
Should you have a	ny questions or need	ıdditional informati	on, ple	ase contact	me at (951) 92	8-3777, ext. 4478.						
	De		•			-						
Sincerely,												
- 1. Fan					m. ·	1620						
Rudy Esparza	chaician				Date	0-0-5016	2					
Sr. Engineering Technician New Business Development												
New Business Development Date:												
Reviewed By	1/1/	1/4				6/6//6	>					
	1/1	1	_			97						
	/	.50				/ /						



Pressure (psi)	77.45	78.32	79.86	77.03	76.90	77.61	(76.18)	52.68	57.13	56.60	56.36	76.92	75.62	75.35	76.64	76.88	77.12	77.83	77.62	77.78	77.87	78.21	77.52	77.50	77.70
Head (ff)	1,703.83	1,705.85	1,709.41	1,702.87	1,702.57	1,704.21	1,700.91	1,646.69	1,656.94	1,655.72	1,655.17	1,702.63	1,699.62	1,698.99	1,701.97	1,702.53	1,703.09	1,704.72	1,704.24	1,704.60	1,704.81	1,705.61	1,704.00	1,703.95	1,704.42
Demand (gpm)	00.00	00.00	0.00	0.00	0.00	0.00	0.00	2,000.00	2,000.00	2,000.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Time	00:00 hrs	01:00 hrs	02:00 hrs	03:00 hrs	04:00 hrs	05:00 hrs	06:00 hrs	07:00 hrs	08:00 hrs	09:00 hrs	10:00 hrs	11:00 hrs	12:00 hrs	13:00 hrs	14:00 hrs	15:00 hrs	16:00 hrs	17:00 hrs	18:00 hrs	19:00 hrs	20:00 hrs	21:00 hrs	22:00 hrs	23:00 hrs	24:00 hrs
35	-	2	ဗ	4	25	9	7	œ	O	9	7	12	13	4	15	16	17	18	19	20	21	22	23	24	25

Pressure (psi)	77.49	78.36	79.91	77.07	76.94	77.65	(26.22)	54.86	59.30	58.77	58.54	76.97	75.66	75.39	76.68	76.92	77.17	77.87	77.66	77.82	77.91	78.26	77.56	77.54	77.74
Head (ft)	1,703.83	1,705.85	1,709.41	1,702.87	1,702.57	1,704.21	1,700.91	1,651.61	1,661.86	1,660.64	1,660.09	1,702.63	1,699.62	1,698.99	1,701.97	1,702.53	1,703.09	1,704.72	1,704.24	1,704.60	1,704.81	1,705.61	1,704.00	1,703.95	1,704.42
Demand (gpm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,000.00	2,000.00	2,000.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.00
Time	00:00 hrs	01:00 hrs	02:00 hrs	03:00 hrs	04:00 hrs	05:00 hrs	06:00 hrs	07:00 hrs	08:00 hrs	09:00 hrs	10:00 hrs	11:00 hrs	12:00 hrs	13:00 hrs	14:00 hrs	15:00 hrs	16:00 hrs	17:00 hrs	18:00 hrs	19:00 hrs	20:00 hrs	21:00 hrs	22:00 hrs	23:00 hrs	24:00 hrs
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Velocity (fVs)	6.45	6.45	5.36	5.36	5.36	2.00	4.96	4.96	4.95	4.93
Q	B4159P32	B4159P22	P2705	P2693	P3328	P1552	P1635	P21742	P1625	P17800
1	-	2	က	4	S.	9	7	80	o o	10

Date: Monday, June 06, 2016, Time: 10:45:57, Page 1

Elevation Head Pressure (ft) (ft) (psi)	1,525.00 1,703.83 77.49	,525.10 1,703.83 77.45
Demand Ele (gpm)	`	0.00
Q	N41032-JPA2	N41034-JPA3
_55	-	2



RECEIVED

OCT 17 2016

EMWD - MAIL ROOM

October 13, 2016

Eastern Municipal Water District 2270 Trumble Road Perris, CA 92570

Subject: Veterans Industrial Park 215 Environmental Impact Report

Kimley-Horn and Associates is working with the March Joint Powers Authority to provide environmental services for the proposed industrial project. Veterans Industrial Park 215 proposes two speculative industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. Building 1 would be 1,017,020 square feet and Building 2 would be 1,172,832 square feet. Both buildings would be located on approximately 142.5 acres within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California. A brief project description and project location maps are attached.

The purpose of this letter is to request information regarding the current and future status of water services and facilities available to serve the project, and to receive your input on potential impacts of the project. This information will enable us to analyze potential effects to water services and facilities in the project area.

- Please provide a statement as to your willingness and ability to provide potable water service to the proposed project site.
- Please confirm the boundaries of your service area in relation to the proposed project site.
- Please fill out the questionnaire we have provided. You may provide your responses on the questionnaire or in another format if you prefer.

The information you provide will be the basis for the analysis of water services and facilities to be include in the Environmental Impact Report. Please respond to this questionnaire by mail or email by November 14, 2016.

We greatly appreciate your time and attention to this matter. If you have any questions or comments, or require additional information, please contact me at (619) 744-0138 or via email at Karina.Fidler@kimley-horn.com.

Sincerely,

Karina Fidler, AICP

Kimley-Horn and Associates

Enclosures:

Project Description and Location Maps Water Services/Facilities Questionnaire

Kimley » Horn

Veterans Industrial Park 215 Environmental Impact Report Project Description

The proposed Veterans Industrial Park 215 (VIP 215) project site is approximately 142.5 acres located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California. The project site is presently owned by the March Joint Powers Authority (MJPA) and would be developed under a ground lease. As depicted in Figure 1, the VIP 215 project site is located directly southeast of the Interstate 215 (1-215) Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and west of an existing March Air Reserve Base airport runway. The 1-215 Freeway off-ramp provides no access to the runway, any taxiways or other airport flying facilities.

The project proposes speculative industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. The project proposes two high cube industrial buildings which total approximately 2,219,852 square feet. Building 1 would be approximately 1,017,020 square feet and Building 2 would be 1,172,832 square feet. A logistics center can be defined as building space used for the intermediate storage and distribution of freight and commodities on route between their source and destination. Typical facilities have limited office areas. Each building would have a north to south orientation with trailer truck dock doors located on the east and west sides of the building. All trailer and truck parking would be provided on site. All passenger vehicle, trailer and truck parking would be provided in accordance with development code requirements.

The proposed buildings would be designed to comply with the height limitations imposed by the Federal Aviation Agency's 7:1 conical surface of the airport, which begins at the eastern property line. Maximum building height on the eastern edge of the property closest to the runway (380 feet from the property line) would be 43 feet, rising to 45 feet at the top of the building's ridgeline. The proposed buildings would incorporate higher elements for the western corners of the buildings (a maximum of 50 feet). Perimeter security fencing would be provided adjacent to the runway. All development within the VIP 215 project area will include all onsite and offsite infrastructure necessary for operation of facilities at the completion of development.

Currently, there is no improved access to the VIP 215 project site. Primary access to the project site would be provided through the construction of an extension of Van Buren Boulevard from its current terminus at the March Field Air Museum and to the project site's southeastern border. The extension of Van Buren Boulevard, between its existing terminus and the project site, would be a divided Modified Secondary Highway. The proposed Van Buren Boulevard extension improvements would occur within the overall VIP 215 project site boundaries. The VIP 215 conceptual site plan incorporates six driveways to provide direct access from the planned Van Buren Boulevard extension.

Secondary access would be provided through the construction of a new road running south from the site's southeastern border to Nandina Avenue, as an extension of existing Western Way. This Western Way extension would be an undivided Secondary Highway with a right-of- way of approximately 86 feet. This road would be an off-site infrastructure improvement encompassing approximately three acres.

Currently, there are no storm water facilities serving the VIP 215 project site. Storm water currently flows from west to east, beneath 1-215 Freeway and across the site. The conceptual drainage plan assumes the construction of a subsurface storm drain to intercept drainage at the project site's northern

border near the existing terminus of Van Buren Boulevard. A second subsurface storm drain would be constructed to intercept drainage at the existing culvert under 1-215 Freeway. These two storm drains would convey off-site regional flows through and around the project site to a proposed trapezoidal channel along the eastern boundary of the project site. This trapezoidal channel would convey regional flows without resulting in standing water to the existing channel near the southeastern edge of the project site.

The VIP 215 project site is not currently served by water, sewer, power, natural gas or telecommunications facilities. Services and infrastructure would be extended to the project site concurrent with the construction of facilities for the proposed project. Existing water and sewer lines are present in the vicinity and any extensions would be located in existing or planned public rights-of-way.

FIGURE 1: Location Map

Veterans Industrial Park 215 Environmental Impact Report Riverside County



Hans W. Kernkamp, General Manager-Chief Engineer



Karina Fidler Kimley-Horn and Associates 401 B Street, Suite 600 San Diego, CA 92101

RE: Response to the Request for Information (RFI) for the Veterans Industrial Park 215 Draft Environmental Impact Report (DEIR)

Dear Ms. Fidler:

The Riverside County Department of Waste Resources (RCDWR) has received and reviewed your letter and questionnaire dated October 13, 2016 for the Veterans Industrial Park 215 DEIR. The following responses are enumerated in accordance with your questionnaire:

- 1. Currently the proposed project site, located directly southeast of the Interstate 215 (I-215) Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and west of an existing March Air Reserve Base airport runway within the March Joint Powers Authority in unincorporated Riverside County, is served primarily by the Badlands, Lamb Canyon and El Sobrante landfill. Waste Management Inc. is the franchise waste hauler for the project site and may transfer solid waste for disposal to one of the three landfills, mentioned above and whose information is provided below.
 - b) The following information is the most current information available for the Badlands, Lamb Canyon and El Sobrante landfill. This information includes facility locations serving the project area and their maximum permitted throughput (tons/day); remaining capacity; and estimated closing dates, as requested in the questionnaire, for the following landfills:

Badlands Landfill:

The Badlands Landfill is located northeast of the City of Moreno Valley at 31125 Ironwood Avenue and accessed from State Highway 60 at Theodore Avenue. The landfill is owned and operated by Riverside County. The existing landfill encompasses 1,168.3 acres, with a total permitted disturbance area of 278 acres, of which 150 acres are permitted for refuse disposal and another 128 acres are designated for existing and planned ancillary facilities and activities. The landfill is currently permitted to receive 4,500 tons per day for disposal and had an estimated total capacity of approximately 20.4 million tons. As of June 30, 2016 (beginning of day), the landfill had a total remaining disposal capacity of approximately 8.1 million tons. The Badlands Landfill is projected to reach capacity, at the earliest time, in 2022. From July 2015 to June 2016, the Badlands Landfill accepted a daily average volume of 2,486 tons and a period total of approximately 765,723 tons. Further landfill expansion potential exists at the Badlands Landfill site.

Karina Fidler RFI for DEIR for Veterans Industrial Park 215 November 29, 2016 Page 2

Lamb Canyon Landfill:

The Lamb Canyon Landfill is located between the City of Beaumont and City of San Jacinto at 16411 Lamb Canyon Road (State Route 79), south of Interstate 10 and north of Highway 74. The landfill is owned and operated by Riverside County. The landfill property encompasses approximately 1,189 acres, of which 580.5 acres encompass the current landfill permit area. Of the 580.5-acre landfill permit area, approximately 144.6 acres are permitted for waste disposal. The landfill is currently permitted to receive 5,000 tons of refuse per day and had an estimated total disposal capacity of approximately 20.7 million tons. As of June 30, 2016 (beginning of day), the landfill had a total remaining capacity of approximately 10.7 million tons. The current landfill remaining disposal capacity is estimated to last, at a minimum, until approximately 2029. From July 2015 to June 2016, the Lamb Canyon Landfill accepted a daily average volume of 1,718 tons and a period total of approximately 529,375 tons. Landfill expansion potential exists at the Lamb Canyon Landfill site.

El Sobrante Landfill:

The El Sobrante Landfill is located east of Interstate 15 and Temescal Canyon Road to the south of the City of Corona and Cajalco Road at 10910 Dawson Canyon Road. The landfill is owned and operated by USA Waste of California, a subsidiary of Waste Management, Inc., and encompasses 1,322 acres, of which 645 acres are permitted for landfill operation. According to Solid Waste Facility Permit (SWFP) # AA-33-0217 issued on 09/09/2009, the El Sobrante Landfill has a total disposal capacity of approximately 209.9 million cubic yards and can receive up to 70,000 tons per week (tpw) of refuse. USA Waste must allot at least 28,000 tpw for County refuse. The SWFP allows a maximum of 16,054 tons per day (tpd) of waste to be accepted into the landfill, due to the limits on vehicle trips. If needed, 5,000 tpd must be reserved for County waste, leaving the maximum commitment of Non-County waste at 11,054 tpd. As of January 1, 2016, the landfill had a remaining in-County disposal capacity of approximately 57.5 million tons. In 2015, the El Sobrante Landfill accepted a total of 717,804 tons of waste generated within Riverside County. The daily average for in-County waste was 2,338 tons during 2015. The landfill is expected to reach capacity in approximately 2057.

- 2. The landfills listed above have landfill capacity until the year 2022 (Badlands), 2029 (Lamb Canyon) and, 2057 (El Sobrante). Additionally, the Lamb Canyon Landfill and the Badlands Landfill have expansion capacity potential.
- 3. The proposed project's waste disposal needs can be met by existing landfill capacity at our Riverside County landfills. The existing three landfills in Western Riverside County provide more than 15 years of waste disposal capacity to the entire County of Riverside, in compliance with State requirements to have 15 years of designated landfill capacity. No additional solid waste facilities or infrastructure are needed to serve the proposed project.

Karina Fidler RFI for DEIR for Veterans Industrial Park 215 November 29, 2016 Page 3

- 4. To assess solid waste impacts, and calculate the projected maximum amount of waste generated at build-out of the Project, for the proposed land uses please consult the CalRecycle website to determine waste generation factors at: www.calrecycle.ca.gov/wastechar/wastegenrates
- 5. RCDWR provides waste reduction programs to help cities and unincorporated areas achieve the state mandated California Integrated Waste Management Plan (CIWMP) waste reduction requirements, including but not limited to recycling programs at its landfills for electronic waste, appliances, tires and metals; and composting outreach and workshops to divert green waste from landfills. The RCDWR operates permanent Household Hazardous Waste (HHW) facilities that offer service on a regular basis, as well as 1-day and 2-day HHW Collection events throughout the year, that provide residents of Riverside County a free and environmentally safe way to properly dispose of household hazardous waste. Additionally, the RCDWR administers an illegal dumping retrieval program and offers community cleanups throughout Riverside County.
- 6. The RCDWR does not apply development fees associated with waste disposal.
- 7. The RCDWR is particularly concerned about the quantity of construction and demolition (C&D) waste that will be generated by the project and how this waste will be disposed of. Should a large quantity of the projects' C&D waste be brought to a county landfill for disposal, it could exceed the landfill's daily permitted capacity, thus a violation of State regulations and an impact to County landfill operation. RCDWR recommends that the following conditions be incorporated in the EIR as mitigation measures to ensure compliance with AB 939:
 - a. Prior to issuance of building permits, a Waste Recycling Plan (WRP) shall be submitted to the Riverside County Department of Waste Resources for approval. At a minimum, the WRP must identify the materials (i.e., concrete, asphalt, wood, etc.) that will be generated by construction and development, the projected amounts, the measures/methods that will be taken to recycle, reuse, and/or reduce the amount of materials, the facilities and/or haulers that will be utilized, and the targeted recycling or reduction rate. During project construction, the project site shall have, at a minimum, two (2) bins: one for waste disposal and the other for the recycling of Construction and Demolition (C&D) materials. Additional bins are encouraged to be used for further source separation of C&D recyclable materials. Accurate record keeping (receipts) for recycling of C&D recyclable materials and solid waste disposal must be kept. Arrangements can be made through the franchise hauler.
 - b. Prior to issuance of occupancy permits, evidence (i.e., receipts or other type of verification) to demonstrate project compliance with the approved WRP shall be presented by the project proponent to the Planning Division of the Riverside County Department of Waste Resources.
 - c. Prior to issuance of a building permit, the applicant shall submit three (3) copies of a Recyclables Collection and Loading Area plot plan to the Riverside County Department of Waste Resources for review and approval. The plot plan shall conform to Design Guidelines for Recyclables Collection and Loading Areas, provided by the Department of Waste Resources, and shall show the location of and access to the

Karina Fidler RFI for DEIR for Veterans Industrial Park 215 November 29, 2016 Page 4

collection area for recyclable materials, along with its dimensions and construction detail, including elevation/façade, construction materials and signage. The plot plan shall clearly indicate how the trash and recycling enclosures shall be accessed by the hauler.

- d. Prior to final building inspection, the applicant shall construct the recyclables collection and loading area in compliance with the Recyclables Collection and Loading Area plot plans, as approved and stamped by the Riverside County Department of Waste Resources.
- 8. No other issues related to solid waste, other than those mentioned above, are identified that need to be addressed in the forthcoming DEIR. Please keep in mind that hazardous materials are not accepted at Riverside County landfills. In compliance with federal, state, and local regulations and ordinances, any hazardous waste generated in association with the project shall be disposed of at a permitted Hazardous Waste disposal facility. Hazardous waste materials include, but are not limited to, paint, batteries, oil, asbestos, and solvents. For further information regarding the determination, transport, and disposal of hazardous waste, please contact the Riverside County Department of Environmental Health, Environmental Protection and Oversight Division, at 1.888.722.4234.

Please call me at (951) 486-3200 if you have any questions regarding the above comments.

Sincerely,

Jose L. Merlan

Urban/Regional Planner II

Attachment: Solid Waste Disposal Questionnaire

PD# 201910



October 13, 2016

Riverside County
Department of Waste Resources
14310 Frederick Street
Moreno Valley, CA 92553

Subject: Veterans Industrial Park 215 Environmental Impact Report

Kimley-Horn and Associates is working with the March Joint Powers Authority to provide environmental services for the proposed industrial project. Veterans Industrial Park 215 proposes two speculative industrial buildings that would allow for a mix of logistics center uses that could support wholesale, storage, distribution, manufacturing and/or assembly centers. Building 1 would be 1,017,020 square feet and Building 2 would be 1,172,832 square feet. Both buildings would be located on approximately 142.5 acres within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California. A brief project description and project location maps are attached.

The purpose of this letter is to request information regarding the current and future status of solid waste disposal services and facilities available to serve the project, and to receive your input on potential impacts of the project. This information will enable us to analyze potential effects to solid waste disposal services and facilities in the project area.

A questionnaire is enclosed for your use. You may provide your responses on the questionnaire or in another format if you prefer. The information you provide will be the basis for the analysis of solid waste disposal services and facilities to be include in the Environmental Impact Report. Please respond to this questionnaire by mail or email by November 14, 2016.

We greatly appreciate your time and attention to this matter. If you have any questions or comments, or require additional information, please contact me at (619) 744-0138 or via email at Karina. Fidler@kimley-horn.com.

Sincerely,

Karina Fidler, AICP

Kimley-Horn and Associates

Enclosures:

Project Description and Location Maps

Solid Waste Disposal Services/Facilities Questionnaire

SOLID WASTE DISPOSAL SERVICES/FACILITIES QUESTIONNAIRE

1.	What are the locations, types and capacities of your facilities serving the area, and how near capacity are they now operating?	
2.	What, if any, are the current plans for expansion of your facilities? Please briefly describe.	
U.S.		
5 gs		
3.	In what ways will the proposed project affect existing facilities? Would the project cause a need construct a new facility? Do the current facilities have the landfill space to accommodate long-t (i.e. ten years or more) solid waste generation by the proposed project? Please explain.	
	-	
1.	What standard consumption or generation rates do you use in assessing service demands?	

5.	Please describe the County of Riverside Integrated Waste Management Division's policies toward recycling and litter control in the project area.
6.	Please identify any existing development fees applicable to the project
	*
	at the state of th
7.	Please recommend any measures for mitigating potential project impacts, if necessary, that might be incorporated into the project.
8.	Please identify any other issues that you think should be addressed in the Environmental Impact
	Report related to solid waste disposal services.
Tha	nk you for your assistance. Please return completed questionnaire to:
Kim	ley-Horn and Associates

Attn: Karina Fidler 401 B Street, Suite 600 San Diego, CA 92101

Or email to Karina. Fidler@kimley-horn.com



Veterans Industrial Park 215 Environmental Impact Report Project Description

The proposed Veterans Industrial Park 215 (VIP 215) project site is approximately 142.5 acres located within the boundaries of the March Inland Port Airport in unincorporated Riverside County, California. The project site is presently owned by the March Joint Powers Authority (MJPA) and would be developed under a ground lease. As depicted in Figure 1, the VIP 215 project site is located directly southeast of the Interstate 215 (1-215) Freeway off-ramp at Van Buren Boulevard, south of the existing March Field Air Museum, and west of an existing March Air Reserve Base airport runway. The 1-215 Freeway off-ramp provides no access to the runway, any taxiways or other airport flying facilities.

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Currently, there is no improved access to the VIP 215 project site. Primary access to the project site would be provided through the construction of an extension of Van Buren Boulevard from its current terminus at the March Field Air Museum and to the project site's southeastern border. The extension of Van Buren Boulevard, between its existing terminus and the project site, would be a divided Modified Secondary Highway. The proposed Van Buren Boulevard extension improvements would occur within the overall VIP 215 project site boundaries. The VIP 215 conceptual site plan incorporates six driveways to provide direct access from the planned Van Buren Boulevard extension.

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border near the existing terminus of Van Buren Boulevard. A second subsurface storm drain would be constructed to intercept drainage at the existing culvert under 1-215 Freeway. These two storm drains would convey off-site regional flows through and around the project site to a proposed trapezoidal channel· along the eastern boundary of the project site. This trapezoidal channel would convey regional flows without resulting in standing water to the existing channel near the southeastern edge of the project site.

The VIP 215 project site is not currently served by water, sewer, power, natural gas or telecommunications facilities. Services and infrastructure would be extended to the project site concurrent with the construction of facilities for the proposed project. Existing water and sewer lines are present in the vicinity and any extensions would be located in existing or planned public rights-of-way.

FIGURE 1: Location Map
Veterans Industrial Park 215 Environmental Impact Report

Riverside County





