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Rita Mahoney
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March 6, 2017

Subject: Central Village Specific Plan (PTS #408329) – Water and Sewer Conceptual Service Plan Update

Dear Ms. Mahoney,

This letter presents the revised Central Village Specific Plan (CVSP) Land Use Plan. Specifically, the following revisions to the CVSP Land Use Plan occurred: Planning Areas 2, 3, and 4 were combined; Planning Areas 8 and 9 were combined; Planning Areas 10 and 11 were combined; and the Planning Areas throughout the Land Use Plan were re-numbered to reflect the Planning Area combinations. The revised CVSP Land Use Plan is attached to this Update Letter. Table 1, Central Village Specific Plan Revised Planning Area Numbering, contains a reference key showing the revised Planning Area numbering as compared to the Planning Areas as numbered within the Water and Sewer Conceptual Sewer Service Plan.

The revisions to the CVSP Land Use Plan were minor in nature, and consisted only of the consolidation of planning areas without any changes to allowable uses, requiring the renumbering of planning areas. The Land Use Plan revisions do not affect the analysis or recommendations of the Water and Sewer Conceptual Sewer Service Plan as there were no changes to proposed land use categories or development. Therefore, a revised report is not necessary because the recommendations and conclusions contained in the Water and Sewer Conceptual Sewer Service Plan remain accurate.

Table 1, Central Village Specific Plan Revised Planning Area Numbering

WATER AND SEWER CONCEPTUAL SEWER SERVICE PLAN PLANNING AREA NUMBER	REVISED LAND USE PLAN PLANNING AREA NUMBER
1	1
2	2
3	
4	
5	3
6	4
7	5
8	6
9	
10	7
11	
12	8
13	9
14	10
15	11
16	12
17	13
18	14
19	15
20	16
21	17
22	18
23	19
24	20
25	21
26	22

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We appreciate the opportunity to assist the City and should have any additional questions please call me at 619.272.7283 or Leanne Hammond at 619.272.7226.

Regards,
CH2M



Mark B. Elliott,
Project Manager

MBE:lmh

cc: Jason Shepard, ColRich
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**OTAY MESA CENTRAL VILLAGE
 WATER AND SEWER CONCEPTUAL SEWER SERVICE PLAN
 FEBRUARY 12, 2016**

The City of San Diego (City), in 2014, adopted a new Otay Mesa Community Plan Update (OMCPU) to meet the housing and industrial needs of the region. In support of the OMCPU, an infrastructure plan (Otay Mesa Community Plan Update, Technical Infrastructure Study, by PBS&J) was prepared outlining onsite and offsite water and sewer facility requirements to serve the community at build-out.

The proposed Otay Mesa Central Village planned development includes over 200 acres of the western area of the OMCPU and is being processed as a Specific Plan. It is anticipated that multiple tentative maps will be prepared for the planning area, where more detailed hydraulic analysis will be included for water and sewer service.

Table 1 summarizes the proposed land uses, which includes a mix of multi-family and commercial uses. Nearly 4,500 residential units are proposed, with commercial, school and park areas also included in the specific plan.

Table 1

Planning Area	General Plan Land Use	Specific Plan Land Use	Gross Acres	Net Acres	Max Commercial Square Footage	Target Density	Unit Yield
1	Neighborhood Village (15-44 du/ac)	MH Mixed Use	3.5	3.5	7,500	44	154
2	Neighborhood Village (15-44 du/ac)	MH Multi-Family	6.7	6.7		44	295
3	Neighborhood Village (15-44 du/ac)	MH Mixed Use	3.3	2.6	14,000	44	114
4	Neighborhood Village (15-44 du/ac)	MH Mixed Use	8	6.7	21,700	44	295
5	Population-Based Park	Park	3.5	3.5		0	0
6	Residential – Medium (15-29 du/ac)	MD Multi-Family	5.5	4.8		29	139
7	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.7	7.7		29	223
8	Open Space	Open Space	1.3	1.3		0	0
9	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	5.6	5.4		15	81
10	Open Space	Open Space	4.4	4.4		0	0
11	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	8	7.7		15	116
12	Population-Based Park	Park	6	6		0	0
13	Institutional (3)	School/Recreation	15.5	13.1		0	0

Table 1

Planning Area	General Plan Land Use	Specific Plan Land Use	Gross Acres	Net Acres	Max Commercial Square Footage	Target Density	Unit Yield
14	Neighborhood Village (15-44 du/ac)	MH Mixed Use	11.1	9.5	15,000	35	333
15	Open Space	Open Space	7	7		0	0
16	Neighborhood Village (15-44 du/ac)	MH Mixed Use	12.2	12.2	26,500	35	427
17	Residential – Medium (15-29 du/ac)	MD Multi-Family	3.9	3.5		29	101
18	Population-Based Park	Park	3.1	3.1		0	0
19	Residential – Medium (15-29 du/ac)	MD Multi-Family	10.1	8.8		29	255
20	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	9.4	9		15	135
21	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.9	8.5		29	246
22	Neighborhood Village (15-44 du/ac)	MH Mixed Use	11.7	11.3	27,500	44	497
23	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	6.7	6.2		15	93
24	Neighborhood Village (15-44 du/ac)	MH Mixed Use	6	5.2	27,500	44	228
25	Residential – Medium (15-29 du/ac)	MD Multi-Family	10	9.7		29	281
26	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.8	9.4		29	272
27	Neighborhood Village (15-44 du/ac)	MH Multi-Family	6.5	5.7		35	200
28	Population-Based Park	Park	3.5	3.5		0	0
29	Open Space	Open Space	3.2	3.2		0	0
--	Circulation	Circulation	24.1	40		0	0
Total			229	229	139,700		4,485

Purpose

The preparation and processing of the Otay Mesa Central Village Specific Plan will require environmental review in conformance with CEQA. As part of this effort, supplemental technical studies may be required to identify the required water and sewer facilities needed to serve the specific plan project.

Water Service Plan (Figure 1)

General

The majority of the Project is located within the Otay Water District (District) and will receive potable water service from the District’s Otay Mesa Service Area. Supply to the Project will be provided through connections to the existing and planned 870 Pressure Zone water distribution mains located in Cactus, Airway, Heritage, and Siempre Viva Roads. A small portion of the Project

located west of Heritage Road, mainly Lots 1, 2 and 3, is located within the City of San Diego's (City) water service area, however, there are no existing City water facilities in close proximity to these parcels. Water supply to these parcels from the City will be challenging and would have to be provided either through extension of the City's existing South San Diego water system in Heritage and Airway Roads. Because these road extensions are not planned to be constructed in early phases of development alternative water service plans should be explored including a supply connection to District facilities, with a service agreement between the City and District, or by annexation of the parcels into the District service area and de-annexation of this island area from the City.

One notable change in alternative water supply from the OMCPU is that the District has implemented a moratorium on the use of recycled water in the Otay Mesa area due to the high capital cost to extend recycled water service to the area, in a Board action dated July 2, 2014. As a result, the District will not require the construction of any recycled water facilities as part of the Otay Mesa Central Village and all future irrigation will be via the potable water system.

Regional Supply

Potable water is supplied to the District's Otay Mesa Service Area through a connection to the San Diego County Water Authority (SDCWA) Second Aqueduct located near Lower Otay Reservoir. Water is delivered to the existing 36.7 million gallon (MG) 571-1 Reservoir and then pumped into the 871 Pressure Zone water distribution system by the 11 million gallon per day (mgd) capacity 871-1 Pump Station to the 11 MG 871-1 Reservoir. As part of the District's Capital Improvement Program, construction of a new 11 mgd capacity pump station to replace the 871-1 Pump Station underwent preliminary design in 2014. An additional 10 MG operational storage reservoir after year 2020 is also planned. The District is in the process of preparing an update to its Water Master Plan and it is anticipated that several planned capital improvement projects may be revised or deferred due to a lower water demand forecast being projected. In addition, the District is pursuing a new local water supply project with the Rosarito Desalinated Water Conveyance Project to provide a new reliable water supply from the south. The proposed conveyance project would be located in the eastern portion of Otay Mesa and is currently undergoing the preparation of a NEPA/CEQA document with the State Department as the lead agency.

The District also has an agreement with the City for a 10 mgd water supply from the City's Otay Filtration Plant. The City's obligation to supply water under this agreement is contingent upon there being a surplus of water at the Plant, until such time when the Plant is expanded. As a result, this supply is viewed as an emergency water supply in the event of a facility outage affecting SDCWA supplies and is currently supplies by a temporary pump station.

The western portion of the Project, if served by the City, would be supplied by the City's South San Diego Service Area, which receives potable water from the City owned Otay Filtration Plant located at Lower Otay Reservoir. Water is delivered from the plant to the 15 MG South San Diego Reservoir with a high water elevation of 490 feet. The Project could be served from an extension of the existing 680 Pressure Zone distribution system which receives supply from the South San Diego Reservoir via the South San Diego Pipelines and the Otay Mesa and Ocean View Hills Pump Stations, however, there are no immediate facilities in the vicinity of Parcels 1, 2, and 3. Extension of water transmission mains would be problematic until future roadway extensions are completed in Heritage Road and Airway Road.

It is recommended that implementation of the Specific Plan consider alternative water service plans for Parcel 1, 2, and 3 from the District to provide a cost effective and environmental preferred alternative to service this area.

Per the provisions of Senate Bills (SB) 610 and 221, the Project will require preparation of water supply assessment and verification reports by the District as part of environmental review in conformance with CEQA. A Water Supply and Verification (WSA&V) Report was prepared and approved by the District for the OMCPU in July 2013 which includes the Specific Plan area. *It is recommended as part of the Specific Plan process a supplement or addendum to the WSA&V Report is prepared for only the Specific Plan portion and submitted to the District for Board approval.*

Water System Improvements

The Project can receive water service by three direct connections to an existing 10-inch District water main in Cactus Road and parallel 14-inch and 16-inch mains in Airway Road. Parcels 1, 2, and 3 could be easily served by extensions from the District water system. However, if these parcels situated west of Heritage Road do not receive potable water service from the District, an existing 24-inch City main in Otay Mesa Road would have to be extended south in Heritage Road to the project to provide City water service, which may not be feasible due to the uncertainty of the Heritage Road extension.

Based on water demand projections, the project is anticipated to require an average annual demand of 1.45 million gallons per day (mgd) as shown in Table 2. Based on this level of demand, the initial connections to the existing mains in Airway and Cactus Road should provide adequate capacity and redundancy to serve the Project. Based on proposed pad elevations ranging from 480 feet to 510 feet, static pressure in the District system will range from 155 to 170 psi. The likely critical hydraulic condition for the distribution system will be fire flow requirements. The District will require preparation of a Sub Area Water Master Plan (SAMP) for proposed tentative maps processed within the Specific Plan area.

Sewer Service Plan (Figure 2)

General

The City of San Diego will provide sanitary sewer service for the entire Project via development of a new onsite sewer collection system and connections to the Otay Mesa Trunk Sewer system. Wastewater flows generated within the Project will flow by gravity to Cactus Road, which flows to Pump Station 23T located near Cactus and Siempre Viva Roads. Pump Station 23T conveys flow to an 18-inch gravity sewer in Otay Mesa Road that currently connects to the City's Otay Valley Trunk Sewer. The City's sewer master plan includes diversion of Pump Station 23T flows to the west in Otay Mesa Road and conveyed through new trunk sewer improvements to the San Ysidro Interceptor, near Interstate 5 and 805, when capacity is reached in the Otay Valley Trunk Sewer.

Based on sewer demand projections, the project is anticipated to require sewer flows of 1.26 mgd as shown in Table 2. Based on these projected flows, the connection to the gravity main in Cactus Road with some minor upgrades, and conveying through Pump Station 23T should provide the necessary sewage capacity for the project until planned upgrades are completed on the City's Otay Mesa Trunk Sewer system as noted in the following section.

Regional Sewer System

The on-site sewer collection system will convey flows southeasterly toward an existing 10-inch gravity main located in Cactus Road, which should be upgraded to 18-inch as part of the Project. This new gravity main flows into Pump Station 23T, which is located at Cactus and Siempre Viva Roads. This station has a current capacity of approximately 3 mgd. Recorded peak existing inflows (from 2008) to the station are approximately 1 mgd. Pump Station 23T pumps flows through a 16-inch diameter force main in Cactus and Otay Mesa Roads to an 18-inch diameter gravity main in Heritage Road which flows to the Otay Valley Trunk Sewer.

The City has designed the extension of the Otay Mesa Trunk Sewer gravity system from Otay Mesa Road to a future connection with the San Ysidro Interceptor located west of Interstate 5. Initial phases of the extension include construction of a large-diameter gravity sewer in Otay Mesa Road, expansion of the temporary pump station at Cactus and Otay Mesa Roads, and construction of larger diameter force mains in Cactus and Otay Mesa Roads. The upgrades to Pump Station 23T and the new Cactus Road force main have not been designed. Once these improvements are complete, Project flows will be redirected from the Otay Valley Trunk Sewer to the Otay Mesa Trunk Sewer in Otay Mesa Road. In the interim flows will continue to Otay Valley from the Project until hydraulic constraints are reached as noted below.

Hydraulic analysis of the existing regional sewerage system, including temporary pumping operations to the Otay Valley Trunk Sewer, have indicated that future capacity constraints may arise due to continued development of areas to the east of Heritage Road. Specifically, reaches of the Otay Valley Trunk sewer may exceed capacity based on current development and flow projections. Current construction phasing of the Otay Mesa Trunk Sewer, will allow flow to be redirected from the Otay Valley Trunk Sewer. Continued monitoring of the Otay Mesa Trunk Sewer construction progress as well as flow conditions within the Otay Valley Trunk Sewer under interim temporary pumping operations is recommended to assess potential regional sewer constraints.

The specific requirements and timing of the Otay Mesa Trunk Sewer and Pump Station 23T improvements have been identified in the City's report untitled: Otay Mesa Trunk Sewer Refinement and Phasing Report (Addendum No. 1 May 2009). *It is recommended that as part of the tentative map preparation that this report be reviewed with the City to determine the current flow and capacity conditions on Otay Mesa and in Otay Valley.* The City has seen a significant reduction in sewer flows and development forecasts were likely conservative, which may result in deferral of sewer improvement upgrades in the future.

The City plans to develop a sewer assessment financial district for the Otay Mesa sewer service area, including portions of the County of San Diego, to assist in the funding of long term sewer improvements. In 2010, some progress was made in its formation by several property owners but subsequently stalled due to a slowdown in development. *As part of tentative map activities this sewer assessment would need to be evaluated as part of the participation in sewer system upgrades.*

Wastewater Treatment Plant Capacity

The City continues to evaluate and updates its regional wastewater treatment and disposal needs incorporating current SANDAG population projections and sewer generation trends in the region. As such, the City has included the proposed OMCPU in its regional treatment plant capacity planning at the South Bay Water Reclamation Plant, which is one of three major sewer plants

operated by the City. The City is also required to upgrade its Point Loma Wastewater Treatment Plant to secondary standards and has developed a new treatment and reuse program known as the "Pure Water" program. The City plans to upgrade its existing wastewater plants and construct a new wastewater plant at Harbor Drive to meet the ultimate sewer treatment needs for the region and produce a new source of water supply through advanced water purification. *In summary, the City has sufficient wastewater capacity to serve the OMCPU and in the future through its planned Pure Water program.*

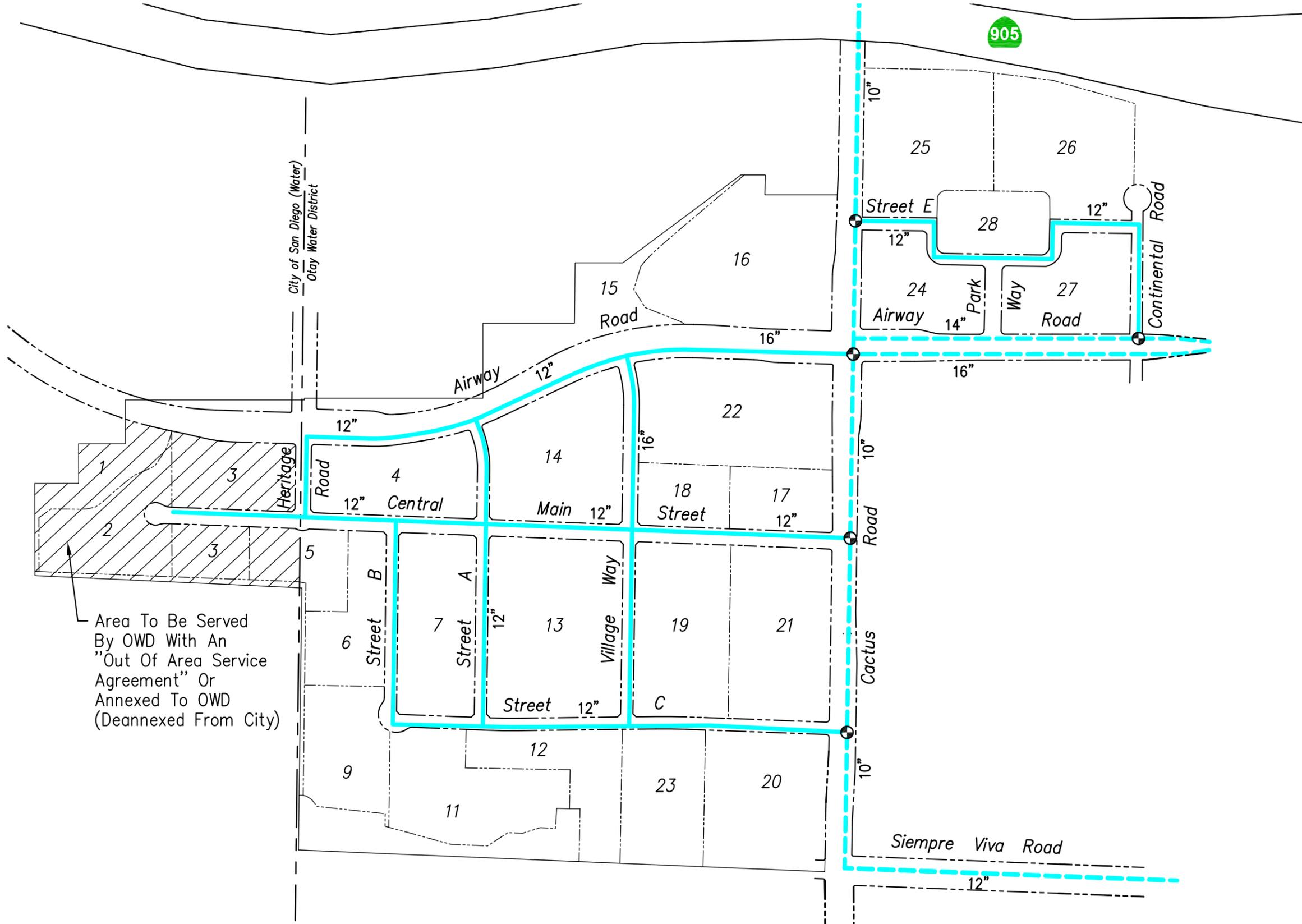
Table 2: Parcel Water Demand and Sewer Flow Projections

Planning Area	General Plan Land Use	Specific Plan Land Use	Gross Acres	Net Acres	Max Commercial Square Footage	Target Density	Unit Yield	Water Demand (mgd) ⁽¹⁾	Sewer Flow (mgd) ⁽²⁾
1	Neighborhood Village (15-44 du/ac)	MH Mixed Use	3.5	3.5	7,500	44	154	0.048	0.043
2	Neighborhood Village (15-44 du/ac)	MH Multi-Family	6.7	6.7		44	295	0.092	0.081
3	Neighborhood Village (15-44 du/ac)	MH Mixed Use	3.3	2.6	14,000	44	114	0.036	0.032
4	Neighborhood Village (15-44 du/ac)	MH Mixed Use	8	6.7	21,700	44	295	0.092	0.082
5	Population-Based Park	Park	3.5	3.5		0	0	0.008	0.000
6	Residential – Medium (15-29 du/ac)	MD Multi-Family	5.5	4.8		29	139	0.043	0.038
7	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.7	7.7		29	223	0.069	0.062
8	Open Space	Open Space	1.3	1.3		0	0	0.000	0.000
9	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	5.6	5.4		15	81	0.025	0.022
10	Open Space	Open Space	4.4	4.4		0	0	0.000	0.000
11	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	8	7.7		15	116	0.036	0.032
12	Population-Based Park	Park	6	6		0	0	0.013	0.000
13	Institutional (3)	School/Recreation	15.5	13.1		0	0	0.023	0.018
14	Neighborhood Village (15-44 du/ac)	MH Mixed Use	11.1	9.5	15,000	35	333	0.104	0.092
15	Open Space	Open Space	7	7		0	0	0.000	0.000
16	Neighborhood Village (15-44 du/ac)	MH Mixed Use	12.2	12.2	26,500	35	427	0.133	0.118
17	Residential – Medium (15-29 du/ac)	MD Multi-Family	3.9	3.5		29	101	0.031	0.028
18	Population-Based Park	Park	3.1	3.1		0	0	0.007	0.000
19	Residential – Medium (15-29 du/ac)	MD Multi-Family	10.1	8.8		29	255	0.079	0.070
20	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	9.4	9		15	135	0.042	0.037
21	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.9	8.5		29	246	0.076	0.068
22	Neighborhood Village (15-44 du/ac)	MH Mixed Use	11.7	11.3	27,500	44	497	0.155	0.138
23	Residential – Low Medium to Medium (10-29 du/ac)	LD Multi-Family	6.7	6.2		15	93	0.029	0.026
24	Neighborhood Village (15-44 du/ac)	MH Mixed Use	6	5.2	27,500	44	228	0.071	0.063
25	Residential – Medium (15-29 du/ac)	MD Multi-Family	10	9.7		29	281	0.087	0.078
26	Residential – Medium (15-29 du/ac)	MD Multi-Family	9.8	9.4		29	272	0.084	0.075
27	Neighborhood Village (15-44 du/ac)	MH Multi-Family	6.5	5.7		35	200	0.062	0.055
28	Population-Based Park	Park	3.5	3.5		0	0	0.008	0.000
29	Open Space	Open Space	3.2	3.2		0	0	0.000	0.000
--	Circulation	Circulation	24.1	40		0	0	0.000	0.000
Total			229	229	139,700		4,485	1.45	1.26

⁽¹⁾ Water Demand Method uses the OMCP per Capita approach (pg 26) with average occupancy (pg 27) for Residential and Commercial plus the per Ac approach for non -Residential/Commercial

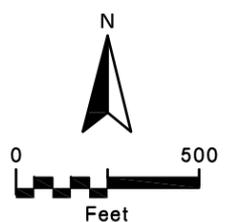
⁽²⁾ Sewer Demand Method uses the OMCP per Capita approach with average occupancy (pg 29) for Residential and the per Ac approach with a 75% return to sewer ratio for non -Residential

⁽³⁾ 197 dwelling units within Planning Area 13 only would be constructed in the event that this planning area is not needed as a school site. In the event Planning Area 13 is developed with residential units, the total number of dwelling units allowed within the CENTRAL VILLAGE would increase to 4,682 dwelling units.

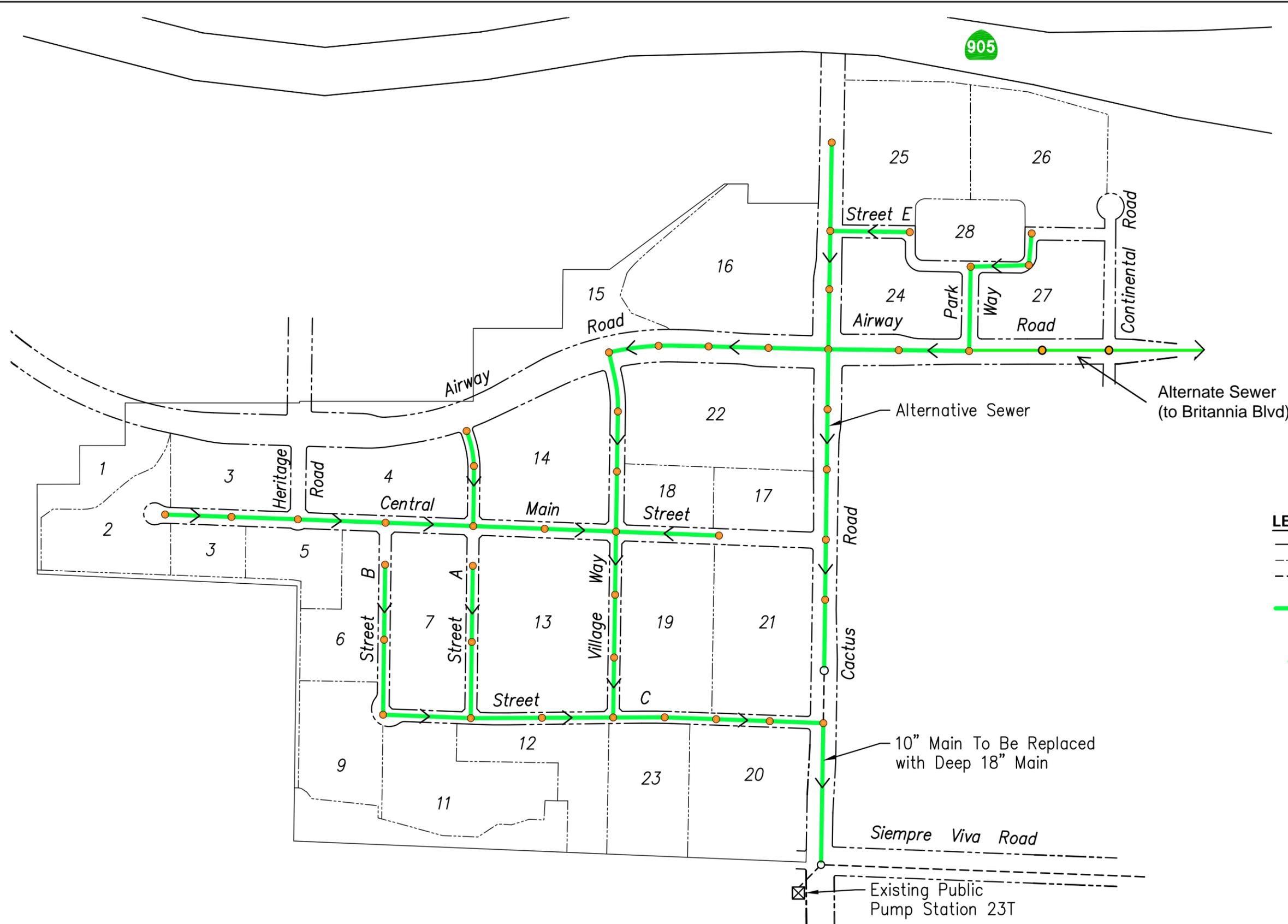


LEGEND

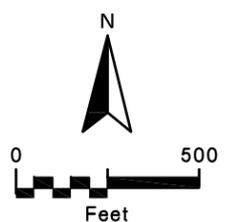
- Right-Of-Way
- Parcel Boundary
- - - - - Existing OWD Pipeline
- 13 Lot Number
- Proposed OWD Pipeline
- ⊕ Proposed Connection



Conceptual Water System
Figure 1



- LEGEND**
- Right-Of-Way
 - Parcel Boundary
 - Existing Sewer
 - 13 Lot Number
 - Proposed Sewer
 - Existing Manhole
 - Proposed Manhole
 - Sewer Flow Direction



Conceptual Sewer System
Figure 2