APPENDIX R

Water Supply Assessment for City of Davis: Village Farms Davis, Shriners, Palomino Place, and DiSC 2022

Prepared for
City of Davis
Davis, CA
April 24, 2024

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Subject: Water Supply Assessment for the City of Davis:
Village Farms Davis, Shriners, Palomino Place, and DiSC 2022

Dear Mr. Gryczko:

We are pleased to submit this final Water Supply Assessment for the City of Davis proposed Village Farms Davis, Shriners, Palomino Place, and Davis Innovation and Sustainability Campus 2022 projects in accordance with Senate Bill 610 and Senate Bill 221, which require land use planning entities that are evaluating certain larger development projects to verity that sufficient water supplies exist for the project.

Please let us know if you have any questions.

Very truly yours,

Brown and Caldwell

Melanie Holton, PE No. 64983



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List of Abbreviations

ac	acre
AFY	acre-feet per year
ASR	aquifer storage and recovery
BC	Brown and Caldwell
bgs	below ground surface
CASGEM	The California Statewide Groundwater Elevation Monitoring
CEQA	California Environmental Quality Act
CIMIS	California Irrigation Management Information System
City	City of Davis
CPG	Conaway Preservation Group
CSA	County Service Areas
CII	commercial, industrial, and institutional
DiSC 2022	Davis Innovation and Sustainability Campus 2022
DU	dwelling unit
DWR	California Department of Water Resources
ETo	evapotranspiration
°F	degrees Fahrenheit
GPCD	gallons per capita day
gpd	gallons per day
gpd/DU	gallons per day per dwelling unit
gpd/SF	gallons per day per square foot
GSA	Groundwater Sustainability Authorities
GSP	Groundwater Sustainability Plan
in	inch
Ind	Industrial
Inst	Institutional
MFR	multi-family residential
MG	million gallons
mgd	million gallons per day
NDM	North Davis Meadows
no	number
Projects	Village Farms Davis, Shriners, Palomino, and Davis Innovation and Sustainability Campus 2022
RWTF	Regional Water Treatment Facility
SB	Senate Bill
SFR	single-family residential
SGMA	Sustainable Groundwater Management Act
UC	University of California
UCD	University of California, Davis
U.S.	United States
UWMP	Urban Water Management Plan
UWDF	unit water demand factor
WRA	Water Resources Association of Yolo County
WSA	Water Supply Assessment
WSOP	Water System Optimization Plan
WDCWA	Woodland Davis Clean Water Agency
YCCL	Yolo County Central Landfill
YCFC&WCD	Yolo County Flood Control and Water Conservation District
YSGA	Yolo Subbasin Groundwater Agency

Executive Summary

This Water Supply Assessment (WSA) was prepared on behalf of the City of Davis (City) for the proposed Village Farms Davis, Shriner's, Palomino Place, and Davis Innovation and Sustainability Campus 2022 (DiSC 2022) projects (Projects) in accordance with Senate Bill 610 (now codified as California Water Code sections 10910 and 10911) and Senate Bill 221, which require land use planning entities that are evaluating certain large development projects to verify that sufficient water supplies exist for the project.

The proposed Projects total 848 acres and described as follows.

Village Farms is 498 acres outside of the City's current water service area which includes a mixed-use community with a range of residential densities and housing types, neighborhood mixed use, early learning center, educational farm, fire station, and recreational open space.

Shriners is 222 acres outside of the City's current water service area which includes proposed residential uses from high density attached dwelling units to traditional single-family homes. Additionally, the project includes a community park, transit station, eclectic retail/entertainment area, agricultural buffers, greenways, and a passive nature area.

Palomino Place is 26 acres of infill within the City's current water service area which includes a community-centered residential neighborhood with new homes, a multifamily apartment building, renovation of the existing ranch house dwelling, and a new pentathlon training facility and a pool facility.

DiSC 2022 is 102 acres outside of the City's current water service area which includes office, research and development, laboratory advanced manufacturing, hotel/conference center, and multi-family residential land use types. Parks, open space, and agricultural buffer areas are also included.

Currently, the City purchases wholesale surface water from the Woodland Davis Clean Water Agency (WDCWA) and uses the City groundwater wells to meet its water supply needs.

The Projects are estimated to increase the City's projected 2045 water demand by 18 percent (1,830 acre-feet per year (AFY)). The City's projected 2045 available annual potable water supply is 23,320 AFY (15,260 AFY in a dry year), which is above the projected 2045 total demand of 12,081 AFY for the existing service area plus the proposed Project. Therefore, the City's projected available annual potable water supplies are sufficient to serve the demands of the City's existing water service plus the proposed Projects, which is further shown in Section 5.

The City Council's approval of this WSA is not equivalent to approval of the Projects for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City's environmental review of a project under the California Environmental Quality Act (CEQA).

This WSA does not verify the adequacy of the existing distribution system's hydraulic capacity to serve the proposed Project.

Section 1

Introduction

This section discusses the purpose of this water supply assessment (WSA) and the WSA requirements.

1.1 Purpose

This WSA is being prepared for the purpose of documenting the availability of water supplies to serve the City of Davis (City) and the Village Farms Davis, Shriners, Palomino, and Davis Innovation and Sustainability Campus (DiSC 2022) projects (Projects).

The City intends to supply water to the existing water system's service area including the demands due to the future development within the service area through buildout. Water supplies that are excess to the amount needed to supply the buildout of the existing water system's service area are available to supply additional demands outside of the water service area. The proposed Projects (with the exception of Palomino) are located outside of the water system's current water service area.

This WSA documents the estimated buildout demand of the City's current water system's service area and the estimated demands of the proposed Projects. The demands are compared to water supplies to determine the sufficiency of water supplies to serve the projected needs.

The City's 2020 Urban Water Management Plan (UWMP) projected future water supplies that consist of a groundwater supply and a wholesale water supply to supply projected demands within the City's current water service area. More recently, the City's 2023 Water System Optimization Plan (WSOP) (Brown and Caldwell [BC], 2024) included a revised water demand analysis and updated supply projections making the water demand and supply analysis in the 2023 WSOP more current than what was included in the 2020 UWMP (BC, 2021). For the purposes of this WSA, the 2023 WSOP analysis results are used with supplemental information from the 2020 UWMP included only where necessary.

1.2 WSA Requirements

Senate Bill (SB) 610 (now codified as California Water Code sections 10910 and 10911) and Senate Bill 221 require that water assessments be included in environmental documentation for certain projects and an affirmative written verification of sufficient water supply for approval of certain development. Applicable developments are those that would have a water demand that would be equivalent or greater than the amount of water used by a 500 dwelling unit project or would increase the number of service connections by at least 10 percent. The WSA is performed in conjunction with a project's land-use approval process and must include an evaluation of the sufficiency of the water supplies available to the water supplier to meet existing and anticipated future demands including the demand associated with the proposed project(s). The evaluation must cover a twenty-year period and address normal, single dry, and multiple dry water years.

The WSA must identify any existing water supply entitlements, water rights, or water service contracts held by the water supplier or relevant to the identified water supply for the proposed Projects. If the public water supplier relies on groundwater supplies, the WSA must describe the groundwater basins from which the proposed Projects will be supplied. For each basin that has not been adjudicated, the assessment should indicate whether the California Department of Water Resources (DWR) has identified the basin as being critically overdrafted.

1.3 WSA Limitations

The City Council's approval of this WSA is not equivalent to approval of the Projects for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City's environmental review of a project under the California Environmental Quality Act (CEQA). Furthermore, this WSA does not verify the adequacy of the existing and future groundwater well pumping capacity and the existing distribution system's hydraulic capacity to serve the proposed Projects.

Section 2

Service Area Description

This section describes the City's existing water system service area and the proposed Projects.

2.1 Existing Service Area

This section describes the service area, climate, and demographics of the City's water system service area.

2.1.1 Description

The City is located in the Central Valley of California, to the east of the coastal mountain range and San Francisco Bay Area and 12 miles west of the state capital of Sacramento in the southeastern corner of Yolo County. Incorporation of the City occurred in 1917. Water service is provided to all residential (single and multi-family), commercial, industrial, and irrigation customers, and for open space and fire protection uses within the service area. As shown in Figure 2-1, the City's water system serves customers within the City of Davis and the El Macero and Willowbank county service areas (CSA) and the Davis Creek Mobile Home Park, located adjacent to the City. There is an additional CSA (also known as North Davis Meadows (NDM)) located north of the City, that is considered within the City water service area but not currently connected to the City's water system. The City is planning to connect NDM to its existing water system in 2024. The location of the proposed Projects are shown relative to the City's existing service area in Figure 2-1.

The system is supplied by surface water from the woodland Davis Clean Water Agency (WDCWA) Regional Water Treatment Facility (RWTF) and groundwater from local wells. A portion of the WDCWA surface water is delivered to University of California, Davis (UCD) via the City's surface water transmission mains.

The City's population has been increasing since the 1960's. Most of the City's growth was in the residential and open space land use categories, with a relatively small increase of commercial development. Significant multi-family residential development occurred to meet increasing student population housing needs of the UCD. Therefore, some of the City's population is tied to the population of UCD. In the commercial sector, there was some growth in high technology and tourist related businesses. The City has a small industrial sector, primarily centered on light manufacturing. The City has a stable institutional/governmental sector, consisting primarily of local government, schools, public facilities, and hospitals. The City continues to be primarily a residential community, with modest but growing commercial and industrial sectors. The City has a mix of commercial customers, ranging from restaurants, markets, retail stores, insurance offices, beauty shops, gas stations, and office buildings. The City draws visitors from its close affiliation with UCD, proximity to the Interstate 80 corridor, and annual special events.

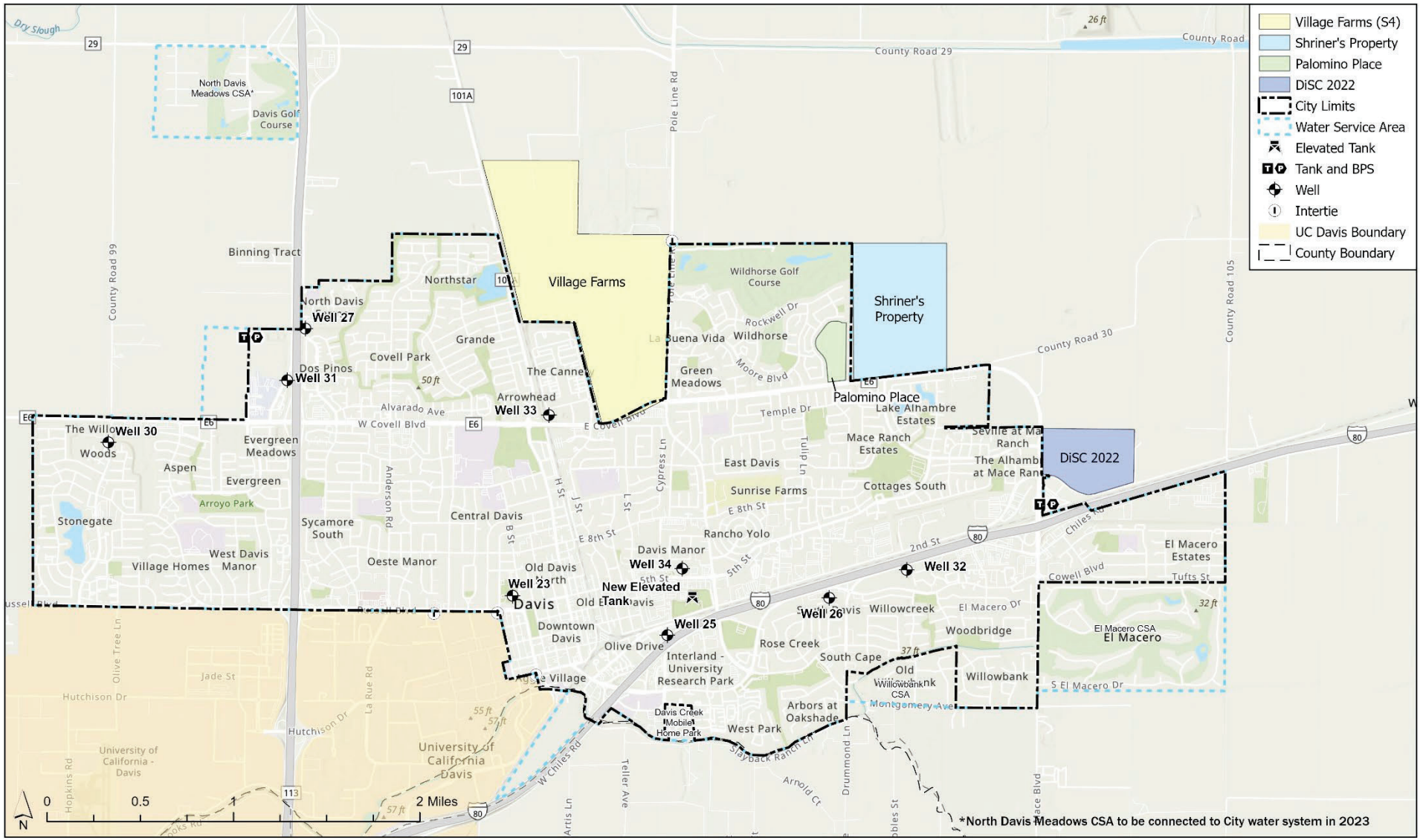


Figure 2-1. City of Davis service area and location of proposed projects

Summers in the City are warm and dry, and winters are cool. The region is subject to wide variations in annual precipitation, and experiences periodic dry periods and wildfires in the regional watershed and surrounding areas with chaparral and oak woodlands. Summers can be hot at times with weekly periods of 100 degrees Fahrenheit (°F) temperatures, greatly increasing summer irrigation requirements.

Based on the historical data obtained from the California Irrigation Management Information System (CIMIS), the City's average monthly temperature from 1983 to 2020 ranged from 45 to 73 °F, but the extreme annual low and high daily temperatures have been 12 and 116 °F, respectively. The historical annual average precipitation is approximately 18 inches. The rainy season normally begins in November and ends in March. Evapotranspiration (Eto) records, which measure the loss of water from the land cover both by evaporation and by transpiration from the plants growing thereon, indicate average monthly values ranging from 1.26 inches in the City's wet January to 8.45 inches in the much drier months of June and July. Low humidity usually occurs in the summer months, from May through September. The combination of hot and dry weather results in high water demands during the summer. Table 2-1 summarizes the City's average climate conditions.

Table 2-1. Average Monthly Climate[a]

Month	Standard average Eto, in	Average rainfall, in	Average temperature, °F
January	1.26	3.46	46
February	2.03	3.66	50
March	3.66	2.69	54
April	5.45	1.06	59
May	7.26	0.59	65
June	8.30	0.21	71
July	8.45	0.05	73
August	7.50	0.09	72
September	5.85	0.22	69
October	4.21	0.64	63
November	2.09	1.94	52
December	1.27	3.21	45
Annual	57.33	17.82	-

a. *Source: 2020 UWMP.*

2.1.2 Existing and Projected Demographics

The City's demographics are expressed in terms of number of connections and population. The City's historical connections by billing classification are listed in Table 2-2. The commercial, industrial, City, and dedicated irrigation connections are combined into one group (commercial, industrial, and institutional [CII] and irrigation).

Table 2-2. Water Service Area Historical Connections							
Billing Classification	2016	2017	2018	2019	2020	2021[a]	2022
Single-family	15,036	15,194	15,331	15,387	15,403	15,411	15,415
Multi-family	570	568	572	577	583	516	518
Multi-family Irrigation	-	-	-	-	-	76	76
CII and Irrigation	1,205	1,202	1,241	1,248	1,277	-	-
Commercial	-	-	-	-	-	629	629
Industrial	-	-	-	-	-	29	29
School	-	-	-	-	-	31	32
City	-	-	-	-	-	39	39
CII Irrigation	-	-	-	-	-	581	582
Total	**16,811**	**16,964**	**17,144**	**17,212**	**17,263**	**17,312**	**17,320**

Source: 2016-2020 per 2023 WSOP (BC, 2024). 2021-2022 provided by City staff.

a. *The City has recently reclassified customer accounts to more accurately reflect billing classifications with water use sector. As a result, the 2021 values shown in this table vary from what is included in the 2023 WSOP.*

Table 2-3 shows the historical and projected population through 2045 per the 2023 WSOP. As future developments are proposed to be constructed, the City's population is estimated to increase. As described in the 2023 WSOP, near-term population growth is associated with developments currently under construction to be online in 2023, connection of North Davis Meadows in 2024, and developments with completed planning review and pending construction to be constructed in 2028. As shown in Table 3-2 of the 2023 WSOP, the 2020 historical ratio of 4.4 people per residential connection (single- and multi-family) is used to estimate the population increase associated with this growth. The 2020 historical ratio of 4.4 people per residential connection is based on the 2020 Department of Finance population estimate for the City combined with the estimated population for El Macero and Willowbank CSAs and the Davis Creek Mobile Home Park, consistent with the 2020 UWMP and 2023 WSOP. This total 2020 population estimate was then divided by the total number of residential connections (single and multi-family connections) for 2020, resulting in an average estimated population/residential connection ratio of 4.4. Long-term population growth within the City's existing service area is estimated at an annual rate of one percent from 2028 through residential (single- and multi-family) buildout in 2031 as estimated in the 2023 WSOP.

Table 2-3. Water Service Area Population – Current and Projected						
Year	2020	2025	2030	2035	2040	2045
Existing City service area[a]	70,963	69,231	72,881	72,884	72,884	72,884

a. *Source: Table 3-2 of 2023 WSOP (BC, 2024).*

2.2 Description of Projects

The proposed Projects total 730 acre and are described in this section. Village Farms Davis, Shriners, and DiSC 2022 projects are located outside of the City's current water service area. Palomino Place is considered infill and is located within the City's current water service area.

2.2.1 Village Farms Davis

Village Farms Davis is a 498-acre site located north of East Covell Boulevard, east of F Street, and west of Pole Line Road in a currently unincorporated portion of Yolo County, California, as shown in Appendix A (North Davis Land Company, 2023). Village Farms Davis proposes a mixed-use community including a range of residential densities and housing types, neighborhood mixed use, early learning center, educational farm, fire station, and recreational open space. Figure 2-2 illustrates the proposed land use plan for Village Farms Davis and Table 2-4 summarizes the proposed land use.

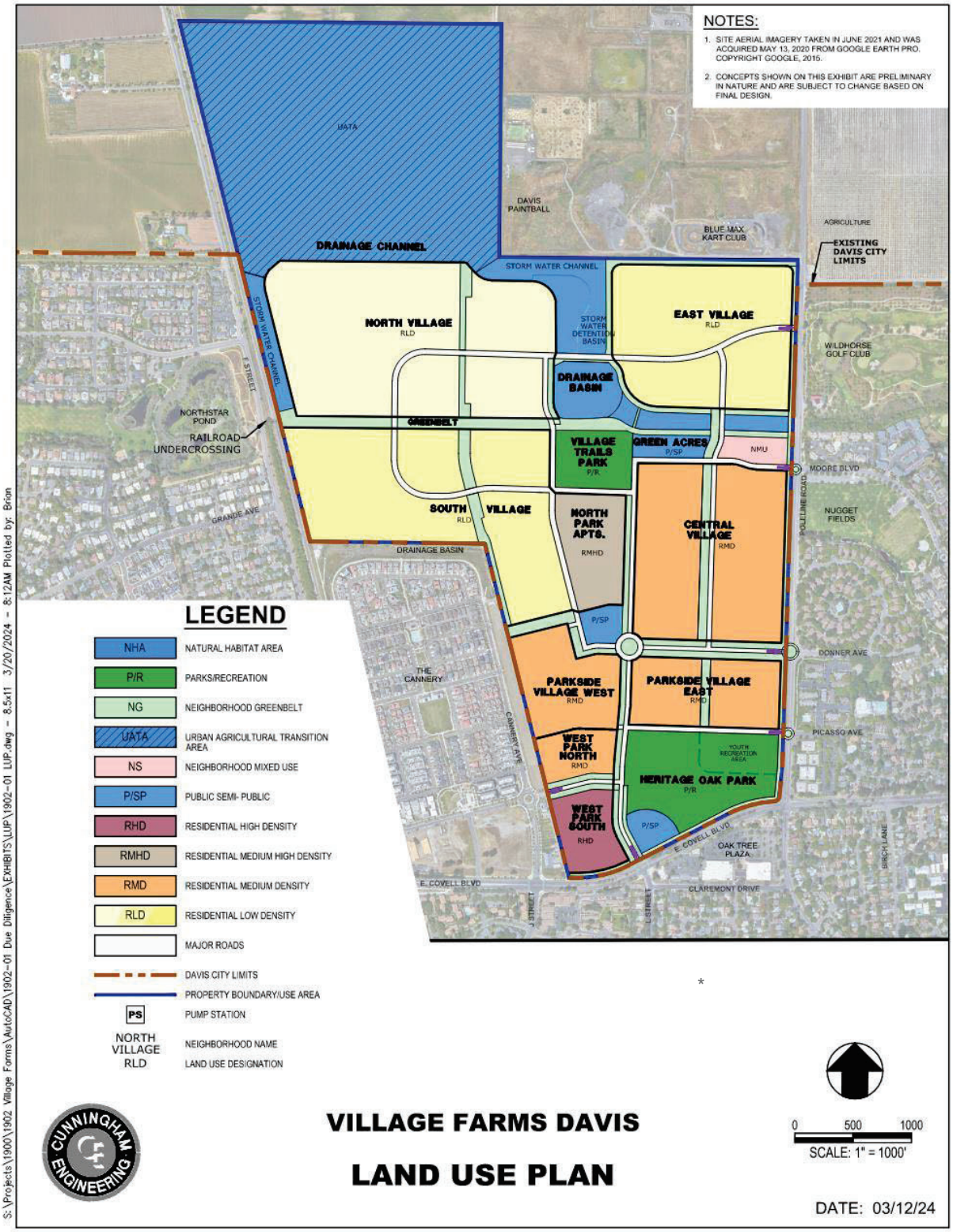


Figure 2-2. Village Farms Davis Land Use Map

Table 2-4. Land Use and Demographics for Village Farms Davis

Land Use Designation[a]	Land Use[a]	Estimated City Billing Classification[b]	Phase No.	Acres[a]	Dwelling Units[a]	Estimated Residential Connections[c]
Park/Open Space	Park/Recreation	Irrigation	2	27.8	-	-
	Neighborhood Greenbelt	Irrigation	1&2	39.7	-	-
	Urban Agricultural Transition Area	-	1	118.4	-	-
Neighborhood Retail	Neighborhood Retail	Commercial	2	2.8	-	-
Public/Semi-Public	Educational Farm	Public	2	2.8	-	-
	City Storm Water Conveyance		1	25.8		
	Public Day School	Public	2	2.4	-	-
	Public Safety Center	Public	2	2.5	-	-
High Density Residential	West Park South	Multi-Family Residential	1	7.9	240	6
Medium High Density Residential	North Park Apartments	Multi-Family Residential	2	11.6	200	5
Medium Density Residential	Central Village	Single-Family Residential	1	40.0	320	320
	Parkside Village West	Single-Family Residential	2	15.1	150	150
	Parkside Village East	Single-Family Residential	1	16.1	150	150
	West Park North	Single-Family Residential	1	5.9	60	60
Low Density Residential	North Village	Single-Family Residential	2	64.8	220	220
	East Village	Single-Family Residential	1	39.6	220	220
	South Village	Single-Family Residential	2	53.0	240	240
Total		-	-	**476.2**	**1,800**	**1,371**
Major Roadways				21.3		
Project Area Total				**497.5[d]**		

a. *Source: Table W-1 Potable Water Demand (Cunningham Engineering, 2024a).*

b. *Assumed per billing classifications in 2023 WSOP (BC, 2024).*

c. *Connection per dwelling unit ratio estimated to be 1:40 for MFR and 1:1 for SFR per 2023 WSOP (BC, 2024).*

d. *The total acreage sums the acreages taken from Table W1 Potable Water Demand (Cunningham Engineering, 2024a), which may result in some rounding errors in totals (497.5 total acreage instead of 497.7 acreage).*

2.2.2 Shriners

Information for the Shriners project is based on project description from the City's Development Projects website (City of Davis, 2024) and demand information provided by City staff on March 7, 2024 (Shriners, 2024). The Shriner's property consists of approximately 222 acres located adjacent to Davis's northeastern city limits of the City of Davis. Although the property is no longer owned by the Shiners, the project, for the time being, is maintaining that name for historical reference. It is bounded on the west by the existing Wildhorse neighborhood and the Wildhorse Horse Ranch property, on the south by East Covell Boulevard, with existing residential beyond, and by undeveloped farmland to the north and east. Roughly the northern 20 percent of the project site is bisected by Channel A (a tributary to Willow Slough), which extends from the Wildhorse Golf Course.

The existing Yolo County General Plan and zoning designations for the property are Agricultural (AG) and Agricultural Intensive (A-N). The project proposes residential uses in a wide variety of products and densities, from high density attached dwelling units to traditional single-family homes. Proposed residential land uses would total 1,200 dwelling units, with an overall residential density of 8.3 dwelling units per acre. Additionally, the project includes a community park, transit station, eclectic retail/entertainment area, agricultural buffers, greenways, and a passive nature area. For this WSA analysis it is assumed that the Shriners project will be in place by 2030. Figure 2-3 illustrates the proposed land use plan for Shriners and Table 2-5 summarizes the proposed land use.



Figure 2-3. Shriners Land Use Map

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Table 2-5. Land Use and Demographics for Shriners				
Land Use [a]	Estimated City Billing Classification	Acres	Dwelling Units	Dwelling Units/Acres
Low Density Residential	Single Family Residential	49.2	193	4
Medium Density Residential	Single Family Residential	73.5	520	7
High Density Residential	Multi-Family Residential	22.5	487	22
Parks/OS/Greenbelts/Paseos	Irrigation	27.8	-	-
(Non-irrigated open space)	-	48.87	-	-
Total	**-**	**222**	**1,200**	**-**

a. *Information for the Shriners project is based on project description from the City's Development Projects website (City of Davis, 2024)*

2.2.3 Palomino Place

Information for the Palomino Place project is based on the information provided in Appendix B. The Palomino Place project is a community-centered residential neighborhood proposed on a 26-acre infill site located within the City of Davis at the southeast corner of Wildhorse Ranch. With 176 new residential units, the project will provide a diverse array of for-sale and rental housing. In addition to providing 130 new homes, the project will include a multifamily apartment building located north of Covell Boulevard comprised of at least 33 deed restricted affordable units (and up to 45 units at the Council's discretion per the EIR) and also renovation of the existing ranch house dwelling. Also, along Covell Boulevard, the project includes a 1.4-acre area designated for the construction of a new pentathlon training facility and a pool facility for use by local community groups. For this WSA analysis it is assumed that the Palomino Place project will be in place by 2030. Figure 2-4 illustrates the proposed land use plan for Palomino Place and Table 2-6 summarizes the proposed land use.



Figure 2-4. Palomino Place Land Use

*

Table 2-6. Land Use and Demographics for Palomino Place				
Land Use [a]	Estimated City Billing Classification	Acres	Dwelling Units[a]	Dwelling Units/Acres[a]
Update Ranch Style Residence	Single Family Residential	0.48	1	2
Cottage	Single Family Residential	0.97	19	20
Half-Plex Townhomes	Single Family Residential	2.53	29	11
SF Homes - Midsized	Single Family Residential	3.53	31	9
SF Homes - Large	Single Family Residential	7.16	51	7
Multi-Family Apartments	Multi-Family Residential	0.72	45[b]	63
Open Space	- [c]	2.76	-	-
Open Space/Trail Connection	- [c]	0.46	-	-
Public/Sem—public	- [c]	1.40	-	-
Street/R.O.W. Dedication	-	5.74	-	-
Total	**-**	**25.8**	**176**	**-**

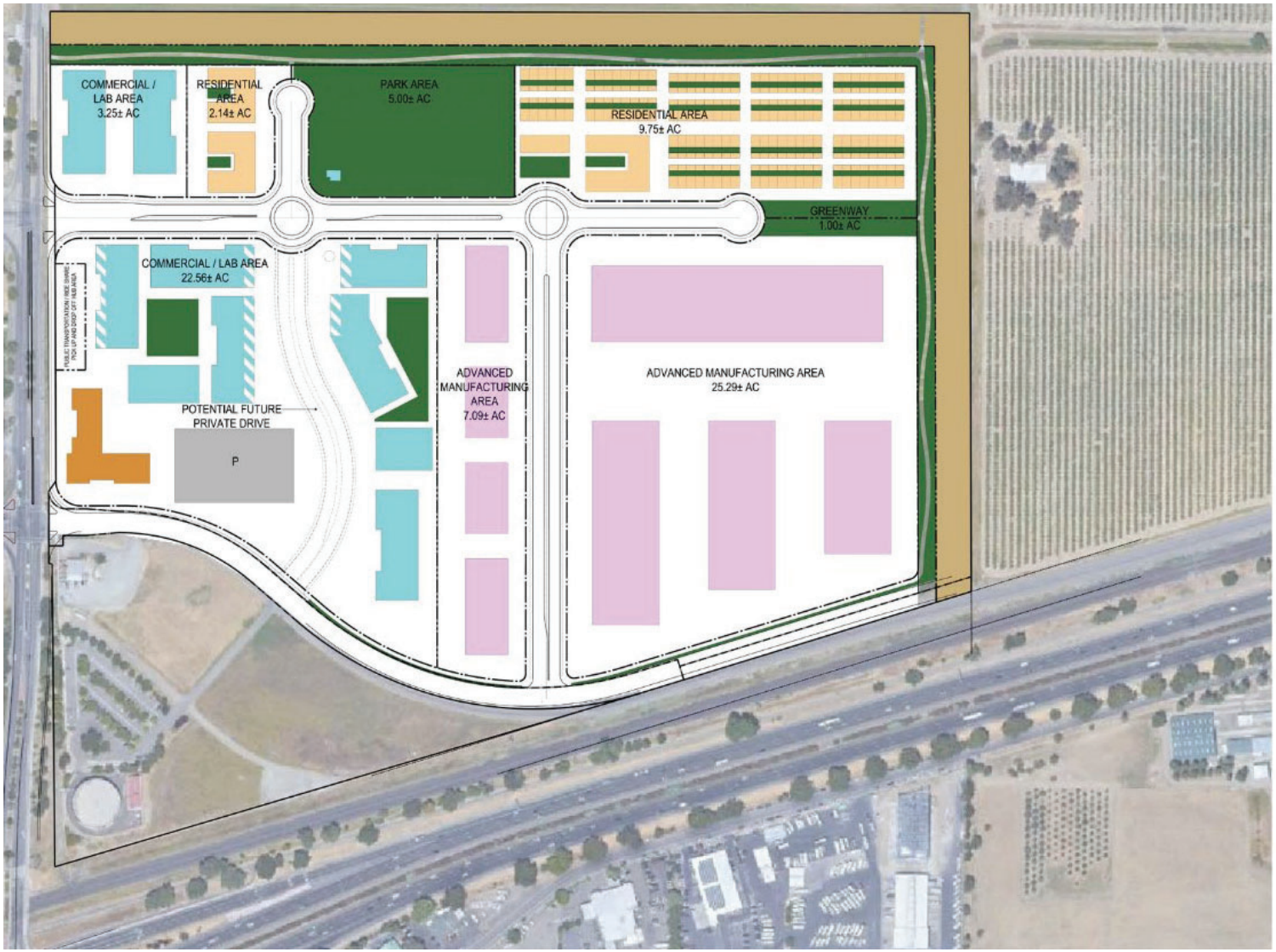
a. *Information for the Palomino Place project is based on the information provided in Appendix B.*

b. *The number of multi-family units could range from 33 to 45 at the Council's discretion per the EIR. This WSA analysis assumes 45 units.*

c. *Assumed non-irrigated open space.*

2.2.4 DiSC 2022

Information for the DiSC 2022 project is based on the DiSC 2022 CEQA Addendum (Raney, 2021). The DiSC 2022 project is 102-acre project site. The project site is located immediately to the east of Mace Boulevard and to the north of CR 32A, northeast of the City limits. The project site is identified by Assessor's Parcel Number (APN) 033-630-009. DiSC would include office, research and development, laboratory advanced manufacturing, hotel/conference center, and multi-family residential land use types. Ancillary retail spaces including health and fitness facilities and coffee and dining are also included. Multi-family residential densities average 39 du/acre. Privately maintained parks and open space areas including the agricultural buffer areas would be approximately 18 acres. Buildout of the DiSC 2022 project is anticipated to occur gradually over the next 10 to 15 years. Phase 1 (35 acres) and Phase 2 (47 acres) are described in the DiSC 2022 CEQA Addendum. Note that the project site also contains 28 acres of AG Buffer (12 acres), Easements (2 acres), Roadways (11.9 acres), and Private Roadway (2.1 acres) that are not included in the Phase 1 and Phase 2 subtotals. Also note that the 102 acres total project acreage shown in Figure 3 of the DiSC 2022 CEQA Addendum does not include hotel, ancillary retail, and private roadway acreages (3.7 acres, 1.8 acres, and 2.1 acres respectively). For this WSA analysis it is assumed that Phase 1 of the DiSC 2022 project will be in place by 2030 and Phase 2 of the DiSC 2022 project by 2035. Figure 2-5 illustrates the proposed land use plan for DiSC 2022 and Table 2-7 summarizes the proposed land use.



*

Figure 2-5. DiSC 2022 Land Use

Table 2-7. Land Use and Demographics for DiSC 2022

Land Use [a]	Estimated City Billing Classification	Phase	Square feet [b]	Acres	Dwelling Units/Rooms	Dwelling Units/Acres
Office; R&D; Laboratory	Commercial	1	550,000	25.8	-	-
Advanced Manufacturing; Prototyping: Product Testing	Industrial	2	550,000	32.4	-	-
Residential – Phase 1	Multi-Family Residential	1	-	7.1	275	39
Residential – Phase 2	Multi-Family Residential	2	-	4.8	185	39
Hotel and Conference Center	Commercial	2	160,000	3.7	150	41
Ancillary Retail	Commercial	1	80,000	1.8	-	-
Parks/Greenways	Irrigation	2		6.0	-	-
AG Buffer	- [d]	-		12.0	-	-
Easements	- [d]	-		2.0	-	-
Roadways	- [d]	-		11.9	-	-
(Private Roadway)	- [d]	-		2.1	-	-
Total	-	-	**1,340,000**	**102** [c]	-	-

a. *Information for the DiSC 2022 project is based on the DiSC 2022 CEQA Addendum (Raney, 2021).*

b. *Square feet from Table 1 of Final DiSC 2022 Addendum*

c. *Total acreages include hotel, ancillary retail, and private roadway (3.7 acres 1.8 acres, and 2.1 acres respectively) that was not in the total project acreage calculation of the DiSC 2022 Preliminary Land Plan (102 acres) (Figure 3 of the Final DiSC 2022 Addendum)*

d. *Assumed non-irrigated land use*

Section 3

Existing and Projected Water Demands

This section describes historical and projected water demand for the existing City water service area and the proposed Projects.

3.1 Historical Water Demand

The City's historical monthly water use within the existing service area (not including UCD or NDM) is illustrated in Figure 3-1. The City's peak monthly water use decreased in 2022 from what occurred the previous six years since the 2013 to 2015 drought, as shown in Figure 3-1.

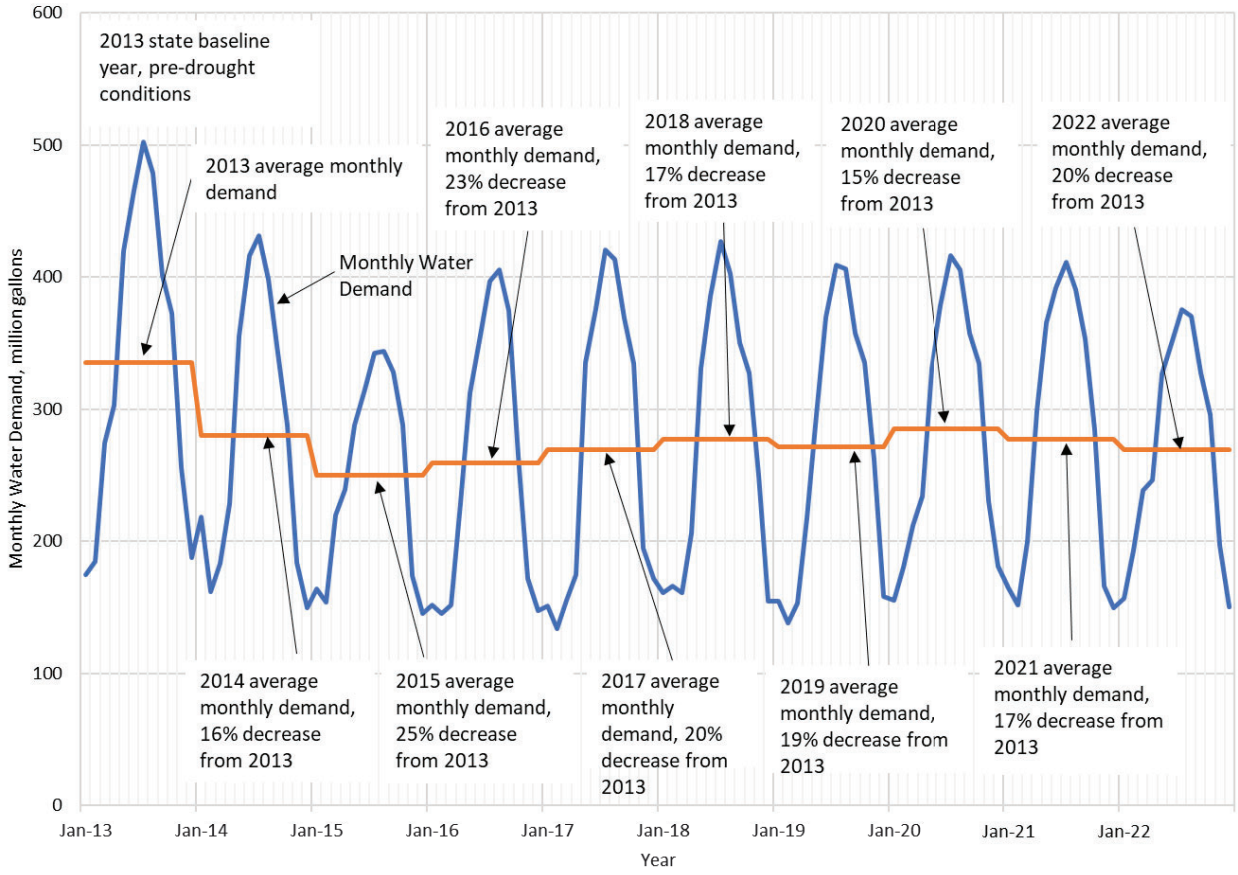


Figure 3-1. Historical water production

3.2 Unit Water Demand Factors Comparison

This section presents the unit water demand factors (UWDFs) used in the 2015 SB 610 Water Supply Assessment (2015 WSA) (Brown and Caldwell, 2015) and the UWDFs developed in the 2023 WSOP. The approach for this WSA is to use the UWDFs resulting in the highest (most conservative) demand estimate for each project. A comparison of the demands projected for Village Farms Davis shows that the 2015 WSA UWDFs result in higher estimated demands than those estimated based on the 2023 WSOP UWDFs. As discussed by project in Section 3.3, in some cases the UWDFs provided in the developer's demand estimate resulted in higher water demand estimates for a particular development. In any case, the UWDFs used in the WSA to estimate water demands by project are those that result in the highest water demand estimate for that project, as determined in Section 3.3.

3.2.1 2023 WSOP Unit Water Demand Factors

Table 3-1 summarizes the existing and future UWDFs for the future development as per the 2023 WSOP. In the 2023 WSOP, the demand factors in Table 3-1 were used to calculate projected demands for existing and future customers within the existing water service area. Future factors include assumptions for climate change and water conservation necessary to meet upcoming draft DWR Water Use Objectives. Customers estimated to be connected to the City before 2028 use existing UWDFs and customers estimated to be connected to the City post 2028 use future UWDFs.

Table 3-1. 2023 WSOP – Unit Water Demand Factors for the Existing Water Service Area[a]

Billing Classification	Existing – For Existing Customers and New Development through 2028				Future – For Post 2028 New Development			
	gpd/acre	gpd/ connection	gpd/DU	GPCD	gpd/acre	gpd/ connection	gpd/DU	GPCD
Single-family	1,501	304	304	-	1,330	270	270	-
Multi-family	1,915	3,457	86	-	1,680	3,032	76	-
Multi-family Irrigation	837	615	15	-	837	615	15	-
CII and Irrigation								
Commercial	956	1,027	-	-	956	1,027	-	-
Industrial	424	1,233	-	-	424	1,233	-	-
School	258	1,971	-	-	258	1,971	-	-
City	1,240	669	-	-	1,240	669	-	-
Irrigation	1,379	1,180	-	-	1,379	1,180	-	-
Physical (Real) Water Loss	-	38.1	-	-	-	31.1	-	-
Apparent Water Loss	-	9.6	-	-	-	9.6	-	-
Total	**-**	**-**	**-**	**129**	**-**	**-**	**-**	**119**
Water Use Goal[b]	**-**	**-**	**-**	**154**	**-**	**-**	**-**	**119**

a. *Source: 2023 WSOP (BC, 2024).*

b. *Per the 2023 WSOP, the City's water use goals for existing and future consist of draft DWR Water Use Objectives by water use type and assumed water use goals for those water use types for which DWR Water Use Objectives are not yet provided (i.e. non-residential indoor and outdoor use and apparent losses) (BC, 2024). See 2023 WSOP for further details.*

3.2.2 2015 WSA Unit Water Demand Factors

UWDFs from the 2015 WSA prepared for projects previously known as Mace Ranch Innovation Center, Davis Innovation Center, Nishi Property, and Triangle are used for this WSA. The UWDFs included in the 2015 WSA are more conservative for projecting water demands on the high end compared to the 2023 WSOP. Because the Village Farms Davis project referenced the 2015 WSA in its water demand calculations the 2015 WSA UWDFs are also included in this WSA. Table 3-2 presents the UWDFs used in demand calculations provided for the Village Farms Davis project in Table W-1 Potable Water Demand (Cunningham Engineering, 2024a) that were derived from the 2015 WSA (BC, 2015).

Table 3-2. 2015 WSA – Unit Water Demand Factors

	gpd/DU b	gpd/ac b	gpd/employee	gpd/employee (indoor)	gpd/1,000 sf (manufacturing or development water)	gpd/room	gpd/visitor or customer	gpd/person(indoor)	gpd/connection	GPCD – through 2020	GPCD – after 2020
Single-Family Residential	345	-	-	-	-	-	-	57	345[a]	-	-
Multi-family Residential	174	-	-	-	-	-	-	57	3,888	-	-
CII	-	2,400	38	15	90	-	-	-	1,890	-	-
Landscape	-	2,712	-	-	-	-	-	-	-	-	-
Retail/convention	-	-	-	-	-	-	3	-	-	164	150
Hotel	-	-	-	-	-	150	-	-	-	-	-

a. Source: 2015 WSA (BC, 2015).

b. Note that only gpd/DU and gpd/ac are used in this WSA.

3.3 Projected Water Demand

This section presents the projected water demands for the existing water service area and the Projects, both individually and combined, through 2045.

3.3.1 Projected Water Demands for the Existing Water Service Area

The projected water demands for the existing water service area (excluding UCD but including NDM) were estimated in the 2023 WSOP. Table 3-3 summarizes historical and projected water demands for the existing water service area (not including the proposed Projects). Water demand projections for 2025 through 2045 assume a normal water year type.

Table 3-3. Historical and Projected Water Demands by Sector for the Existing Water Service Area, AFY [a]							
Year	2021	2022	2025	2030	2035	2040	2045
Single-Family Residential	5,130	4,820	5,100	5,350	5,260	5,200	5,200
Multi-Family Residential	1,930	2,070	1,750	1,886	1,860	1,840	1,840
CII	860	870	600	800	840	850	850
CII Irrigation	1,320	1,320	1,410	1,440	1,510	1,570	1,570
Losses	980	820	930	830	830	840	840
Total	10,210	9,910	9,790	10,310	10,300	10,290	10,290
Palomino Place demands included in 2023 WSOP	0	0	0	39	39	39	39
Total existing system demands without Palomino Place demands	**10,210**	**9,910**	**9,790**	**10,271**	**10,261**	**10,251**	**10,251**

AFY = acre-feet per year.

a. Source: 2023 WSOP (BC, 2024).

3.3.2 Projected Water Demands for the Village Farms Davis Project

The Project is estimated to be constructed in two phases. Phase 1 and 2 are estimated to be completed in years 2030 and 2035, respectively per discussions with City staff and Cunningham Engineering. The projected demands for the proposed Village Farms Davis project are 410 AFY for Phase 1 and 440 AFY for Phase 2, totaling 850 AFY as shown in Table 3-4. As discussed in Section 3.2, because demand calculations for the Village Farms Davis project referenced the UWDFs from the 2015 WSA in its water demand calculations, those UWDFs are also included in this analysis. Table 3-5 shows the projected water demands for the Village Farms Davis project with the 2023 WSOP future UWDFs for comparison purposes. Figure 3-2 shows that using the 2015 UWDFs results in more conservative (higher end) projected water demands for the Village Farms Davis project. The projected demands for the Village Farms Davis project in Table 3-4 are used in this WSA.

Table 3-4. Projected Water Demands for the Village Farms Davis Project (using 2015 WSA UWDFs)

Land Use Designation[a]	Land Use[a]	Estimated City Billing Classification[b]	Phase No.[c]	Phase Year[d]	Acres[a]	Dwelling Units[a]	Unit Water Demand Factor[a] (gpd/unit or gpd/acre)	Average Day Demand[a] (gpd)	Average Day Demand[e] (AFY)
Park/Open Space	Park/Recreation	Irrigation	2	2035	27.8	-	2,712	75,500	85
	Neighborhood Greenbelt	Irrigation	1&2[f]	-	39.7	-	2,712	107,800	121
	Urban Agricultural Transition Area	-	1	2030	118.4	-	0	0	0
Neighborhood Retail	Neighborhood Retail	Commercial	2	2035	2.8	-	2,400	6,800	8
Public/Semi-Public	Educational Farm	Public (School)	2	2035	2.8	-	2,400	6,700	8
	City Storm Water Conveyance	-	1	2030	25.8	-	0	0	0
	Public Day School	Public (School)	2	2035	2.4	-	2,400	5,800	6
	Public Safety Center	Public (City)	2	2035	2.5	-	2,400	6,000	7
High Density Residential	West Park South	Multi-Family Residential/Irrigation	1	2030	7.9	240	174	41,800	47
Medium High Density Residential	North Park Apartments	Multi-Family Residential/Irrigation	2	2035	11.6	200	174	34,800	39
Medium Density Residential	Central Village	Single-Family Residential	1	2030	40.0	320	345	110,400	124
	Parkside Village West	Single-Family Residential	2	2035	15.1	150	345	51,800	58
	Parkside Village East	Single-Family Residential	1	2030	16.1	150	345	51,800	58
	West Park North	Single-Family Residential	1	2030	5.9	60	345	20,700	23
Low Density Residential	North Village	Single-Family Residential	2	2035	64.8	220	345	75,900	85
	East Village	Single-Family Residential	1	2030	39.6	220	345	75,900	85
	South Village	Single-Family Residential	2	2035	53.0	240	345	82,800	93
Phase 1 Total		-	**1**	**2030**	**277.5**	**990**	-	**365,280**	**410**
Phase 2 Total		-	**2**	**2035**	**198.7**	**810**	-	**389,220**	**440**
Total		-	-	-	**476.2**	**1,800**	-	**754,500**	**850**
Major Roadways		-	-	-	21.3	-	-	-	-
Project Area Total		-	-	-	**497.5[g]**	**1,800**	-	**754,500**	**850**

a. Table W-1 Potable Water Demand (Cunningham Engineering, 2024a).
b. Assumed billing classifications and land use categories from the 2023 WSOP (BC, 2024).
c. Phase estimated using Table W-1 Potable Water Demand (Cunningham Engineering, 2024b).
d. Phase 1 and 2 estimated to be completed in years 2030 and 2035, respectively per discussion with City and Cunningham Engineering
e. gpd converted to AFY. Individual values are rounded to nearest 1 and totals to nearest 10, which may result in some rounding errors in totals.
f. Percentage estimated using Village Farms Davis Phasing Plan– 60% of greenbelt in Phase 1, 40% of greenbelt in Phase 2 (Cunningham Engineering, 2024b).
g. The total acreage sums the acreages taken from Table W1 Potable Water Demand (Cunningham Engineering, 2024a), which may result in some rounding errors in totals (497.5 total acreage instead of 497.7 acreage).

Table 3-5. Projected Water Demands for the Village Farms Davis Project (using 2023 WSOP future UWDFs)

Land Use Designation[a]	Land Use[a]	Estimated City Billing Classification[b]	Phase No.[c]	Phase Year[d]	Acres[a]	Dwelling Units[a]	Unit Water Demand Factor[f] (gpd/ unit or gpd/acre)	Average Day Demand (gpd)	Average Day Demand[g] (AFY)
Park/Open Space	Park/Recreation	Irrigation	2	2035	27.8	-	1,379	38,336	43
	Neighborhood Greenbelt	Irrigation	1&2[e]	-	39.7	-	1,379	54,746	61
	Urban Agricultural Transition Area	-	1	2030	118.4	-	0	0	0
Neighborhood Retail	Neighborhood Retail	Commercial	2	2035	2.8	-	956	2,677	3
Public/Semi-Public	Educational Farm	Public (School)	2	2035	2.8	-	258	722	1
	City Storm Water Conveyance	-	1	2030	25.8	-	0	0	0
	Public Day School	Public (School)	2	2035	2.4	-	258	619	1
	Public Safety Center	Public (City)	2	2035	2.5	-	1,240	3,100	3
High Density Residential	West Park South	Multi-Family Residential	1	2030	7.9	240	76	18,240	20
		Multi-Family Irrigation				-	15	4,500	5
Medium High Density Residential	North Park Apartments	Multi-Family Residential	2	2035	11.6	200	76	15,200	17
		Multi-Family Irrigation				-	15	3,000	3
Medium Density Residential	Central Village	Single-Family Residential	1	2030	40	320	270	86,400	97
	Parkside Village West	Single-Family Residential	2	2035	15.1	150	270	40,500	45
	Parkside Village East	Single-Family Residential	1	2030	16.1	150	270	40,500	45
	West Park North	Single-Family Residential	1	2030	5.9	60	270	4,560	5
Low Density Residential	North Village	Single-Family Residential	2	2035	64.8	220	270	59,400	67
	East Village	Single-Family Residential	1	2030	39.6	220	270	59,400	67
	South Village	Single-Family Residential	2	2035	53	240	270	64,800	73
Phase 1 Total		-	**1**	**2030**	**277.5**	**990**	-	**241,948**	**270**
Phase 2 Total		-	**2**	**2035**	**198.7**	**810**	-	**247,252**	**280**
Total		-	-	-	**476.2**	**1,800**	-	**489,200**	**550**
Major Roadways		-	-	-	21.3	-	-	-	-
Project Area Total		-	-	-	**497.5**	**1,800**	-	**489,200**	**550**

a. Table W-1 Potable Water Demand (Cunningham Engineering, 2024a).
b. Assumed billing classifications and land use categories from the 2023 WSOP (BC, 2024).
c. Phase estimated using Table W-1 Potable Water Demand (Cunningham Engineering, 2024a).
d. Phase 1 and 2 estimated to be completed in years 2030 and 2035, respectively per discussion with City and Cunningham Engineering
e. Percentage estimated using Village Farms Davis Phasing Plan – 60% of greenbelt in Phase 1, 40% of greenbelt in Phase 2 (Cunningham Engineering, 2024b).
f. See Table 3-1.
g. Individual values are rounded to nearest 1 and totals to nearest 10, which may result in some rounding errors in totals.

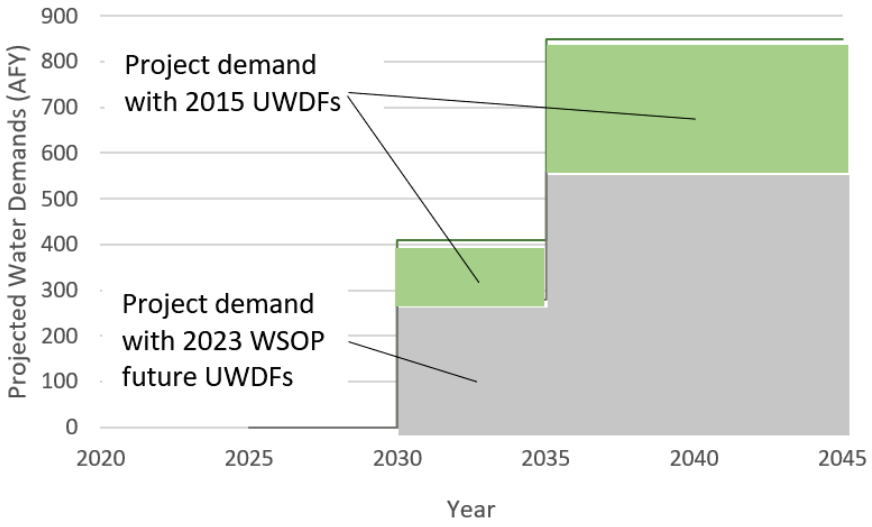


Figure 3-2. Village Farms Davis projected demand comparison when using 2015 UWDFs vs 2023 WSOP future UWDFs

3.3.4 Projected Water Demands for the Shriners

The Project is assumed to be constructed in one phase and completed by 2030. The projected demands per Shriners is 570 AFY and per 2015 WSA UWDFs is 455 AFY, as shown in Table 3-6. Because the water demand estimate per Shriners is higher than the estimate based on the 2015 WSA UWDFs, the Shriners estimate of 570 AFY is used for this WSA.

Table 3-6. Projected Water Demands for the Shriners Project (using City staff-provided demands)

Land Use	Estimated City Billing Classification	Acres	Dwelling Units	Dwelling Units/ Acres	From Shriners provided demands on March 7, 2024 [a]			Based on 2015 WSA UWDFs		
					Unit Water Demand Factor[b] (gpd/unit or acre-feet per acre per year)	Average Day Demand (gpm)	Average Day Demand (AFY)	Unit Water Demand Factor (gpd/ unit or gpd/acre)	Average Day Demand (gpd)	Average Day Demand (AFY)
Low Density Residential	Single Family Residential	49.2	193	4	450	64.8 (93,312 gpd)	105	345	66,585	75
Medium Density Residential	Single Family Residential	73.5	520	7	225	87.4 (125,856 gpd)	141	345	179,400	201
High Density Residential	Multi-Family Residential	22.5	487	22	225	81.8 (117,792 gpd)	132	174	87,438	95
Parks/OS/ Greenbelts/Paseos	Irrigation	27.8	-	-	4.0 and 4.3	119.6 (172,224 gpd)	193	2,712 (3.0 acre-ft per acre per year)	75,394	84
(Non-irrigated open space) [c]	-	48.87	-	-	-	-	-	-	-	-
Total	-	**222**	**1,200**	-	-	**509,184**	**570**		**317,197**	**455**

a. Per Shriners Preliminary Potable Water Demands table provided by City staff on March 7, 2024.

b. Unit Water Demand Factors per Shriners Preliminary Potable Water Demands table provided by City staff on March 7, 2024.

c. Non-irrigated area has zero demand

3.3.6 Projected Water Demands for the Palomino Place Project

The 2023 WSOP estimated 39 AFY in irrigation demands for the area where the Palomino Place project will be located. The Palomino Place project is assumed to be constructed in one phase and completed by 2030. The projected demands estimated per the 2015 WSA UWDFs is 60 AFY, as shown in Table 3-7. The results in an 21 AFY net increase in demand for Palomino Place in the City's demand projections.

Table 3-7. Projected Water Demands for the Palomino Place Project (using 2015 WSA UWDFs)

Land Use	Estimated City Billing Classification	Acres	Dwelling Units	DU/Acres	Unit Water Demand Factor	Average Day Demand	Average Day Demand
					(gpd/unit)	(gpd)	(AFY)
Update Ranch Style Residence	Single Family Residential	0.48	1	2	345	345	0.4
Cottage	Single Family Residential	0.97	19	20	345	6,555	7
Half-Plex Townhomes	Single Family Residential	2.53	29	11	345	10,005	11
SF Homes – Midsized	Single Family Residential	3.53	31	9	345	10,695	12
SF Homes – Large	Single Family Residential	7.16	51	7	345	17,595	20
Multi-Family Apartments	Multi-Family Residential	0.72	45[b]	63	174	7,830	9
Open Space	-[a]	2.76	-	-	-	-	-
Open Space/Trail Connection	-[a]	0.46	-	-	-	-	-
(obstacle course)	-[a]	1.40	-	-	-	-	-
Street/R.O.W. Dedication		5.74	5.56	-	-	-	-
Total	-	**25.8**	**176**	-	-	**53,025**	**60**

a. *Assumed non-irrigated open space.*

b. *The number of multi-family units could range from 33 to 45 at the Council's discretion per the EIR. This WSA analysis assumes 45 units.*

3.3.7 Projected Water Demands for DiSC 2022

Buildout of the DiSC 2022 project is anticipated to occur gradually over the next 10 to 15 years. Phase 1 (35 acres) and Phase 2 (47 acres) are described in the DiSC 2022 CEQA Addendum. For this WSA analysis it is assumed that Phase 1 of the DiSC 2022 project will be in place by 2030 and Phase 2 of the DiSC 2022 project by 2035. The projected demands estimated per the 2015 WSA UWDFs is 350 AFY, as shown in Table 3-8.

Table 3-8. Projected Water Demands for the DiSC 2022 Project (using 2015 WSA UWDFs)

Land Use	Estimated City Billing Classification	Phase No.	Acres	Dwelling Units/ Rooms	Dwelling Units/ Acres	Unit Water Demand Factor (gpd/unit or gpd/acre)	Average Day Demand (gpd)	Average Day Demand (AFY)
Office; R&D; Laboratory	Commercial	1	25.8	-	-	2,400	61,920	69
Advanced Manufacturing; Prototyping: Product Testing	Industrial	2	32.4	-	-	3,920	127,021	142
Residential - Phase 1	Multi-Family Residential	1	7.1	275	39	174	47,850	54
Residential - Phase 2	Multi-Family Residential	2	4.8	185	39	174	32,190	36
Hotel and Conference Center	Commercial	2	3.7	150	41	150	22,500	25
Ancillary Retail	Commercial	1	1.8	-	-	2400	4,408	5
Parks/Greenways	Irrigation	2	6.0	-	-	2,712	16,272	18
AG Buffer	- [d]	-	12.	-	-	-	-	-
Easements	- [d]	-	2.0	-	-	-	-	-
Roadways	- [d]	-	11.9	-	-	-	-	-
(Private Roadway)	- [d]	-	2.1	-	-	-	-	-
Phase 1 Total	-	-	-	-		-	**114,178**	**128**
Phase 2 Total	-	-	-	-	--	-	**197,983**	**222**
Total	-	-	**102** [a]	**610**	-	-	**312,161**	**350**

a. *Total acreages include hotel, ancillary retail, and private roadway (3.67 acres 1.84 acres, and 2.1 acres respectively) that was not in the total project acreage calculation of the DiSC 2022 Preliminary Land Plan (102 acres)*

b. *Assumed non-irrigated land use.*

3.3.8 Total Projected Water Demand

Table 3-9 presents the projected demand for the existing water service area (not including UCD but including NDM) plus the proposed projects. The projects are estimated to increase the City's projected 2045 demand by approximately 1,830 ac-ft (18 percent).

Table 3-9. Total Projected Water Demand for Existing Service Area with Projects, AFY					
Area	2025	2030	2035	2040	2045
Existing water service area[a]	9,790	10,271	10,261	10,251	10,251
Village Farms Davis [b]	0	410	850	850	850
Shriners [c]	0	570	570	570	570
Palomino Place [d]	0	60	60	60	60
DiSC [e]	0	128	350	350	350
Total	**9,790**	**11,439**	**12,091**	**12,081**	**12,081**

a. *See Table 3-3.*

b. *See Table 3-4; Phase 1 and 2 estimated to be completed in years 2030 and 2035, respectively per discussion with City and Cunningham Engineering.*

c. *See Table 3-6.*

d. *See Table 3-7. Note that the net increase in demands for Palomino Place is 21 AFY. The 39 AFY originally estimated for irrigation demands of the Palomino Place area is removed from the existing water service area demands in this table.*

e. *See Table 3-8.*

Section 4

Water Supplies

This section describes the City's historical and projected water supplies which consist of wholesale surface water and groundwater. A short discussion on recycled water is included, but currently the City does not use recycled water to offset potable water distribution system demand.

4.1 Wholesale Surface Water Supply

The City began purchasing surface water from the WDCWA in 2016. The WDCWA was created in 2009 to undertake and implement a project to convey water from the Sacramento River, transmit the water for treatment to the RWTF, and deliver wholesale treated surface water to the City, the City of Woodland, and UCD for use in their respective service areas.

The WDCWA has two separate surface water rights; 45,000 acre-feet per year (AFY) from Permit 20281 and up to 10,000 AFY from a supplemental water right purchased from the Conaway Preservation Group (CPG). Both surface water rights have conditions that can limit WDCWA's ability to divert water. Permit 20281 is subject to the State Water Board's Term 91 that requires permittees to cease diverting water when the State Water Project and the Central Valley Project are releasing stored water to meet water quality and flow requirements in the Sacramento-San Joaquin Delta. The CPG water right is subject to limitation based on Lake Shasta water levels.

The City is entitled to deliveries of 10.2 million gallons per day (mgd) from the WDCWA, totaling approximately 11,420 AFY. WDCWA surface water deliveries to the City are limited by Term 91 and Lake Shasta conditions as follows:

1. If Term 91 curtailments are not in effect (normal years)
    a. The City is limited by its share of WDCWA RWTF capacity, which is 10.2 mgd.
    b. 10.2 mgd of supply is available from WDCWA year-round.
2. If Term 91 curtailments are in effect (dry years)
    a. The City is limited by the lesser of its share of RWTF capacity and its share of the WDCWA secondary water rights obtained from the CPG water, depending on the duration of the curtailment.
        i. When levels in Lake Shasta are normal, the City is entitled to 4,440 AFY of CPG water.
        ii. When levels in Lake Shasta are critical, that total is reduced by 25 percent to 3,330 acre-ft (AF) or lower based on ongoing drought conditions in the future.
    b. 3 mgd is the minimum supply available to the City. In years where there is a short duration Term 91 curtailment (such as in 2012), the City lacks the RWTF capacity to make use of its full allocation of CPG water. In a longer curtailment, however, the CPG water availability becomes the limiting factor.

4.1.1 Climate Change Impacts on Surface Water Supply

As discussed in the 2020 UWMP, climate change is expected to impact the timing and frequency at which the State Water Resources Control Board imposes Term 91 curtailments as they are applied to WDCWA's primary water right. More specifically, Term 91 curtailments are predicted to occur 15 to 20 percent more frequently (BC, 2021). The resulting predicted Term 91 curtailments equate to an average reduction in WDCWA's primary water right diversion from 500 to 900 AFY for the City through the 2040 planning horizon (BC, 2021).

4.1.2 Historical Wholesale Surface Water Supply

Table 4-1 summarizes historical surface water volumes supplied by WDCWA to the City (not including water wheeled to UCD) and identifies the years Term 91 was in effect. The City does not intend to rely entirely on surface water supplies. Table 4-2 describes the projected wholesale surface water supplies by year, depending on the whether it is a normal or dry year.

Table 4-1. Historical Wholesale Surface Water Volume Supplied, AFY[a, b]

Water Supply/Constraint	2016	2017	2018	2019	2020	2021	2022
Purchased Water from WDCWA	3,130	8,630	8,120	8,680	7,980	6,500	8,660
Supply Constraint	Term 91	--	Term 91	--	Term 91	Term 91	Term 91

a. Source: 2016-2021 from 2023 WSOP (BC, 2024). 2022 from City staff.

b. Rounded to nearest 10.

4.1.3 Projected Wholesale Surface Water Supply

Table 4-2 summarizes the projected wholesale surface water supplies for a normal year, a single dry year, and multiple dry years. The City does not anticipate any agreement changes with the WDCWA.

Table 4-2. Projected Wholesale Surface Water Supply, AFY[a]

Year Type	2025	2030	2035	2040	2045
Normal Year[b]	10,520	10,520	10,520	10,520	10,520
Single Dry Year	2,460	2,460	2,460	2,460	2,460
Multiple Dry Year	2,460	2,460	2,460	2,460	2,460

a. Source: 2023 WSOP monthly supply totaled for 12 months in the year (BC, 2024).

b. 11,420 AFY minus reduction of 900 AFY due to climate change (see Section 4.1.1).

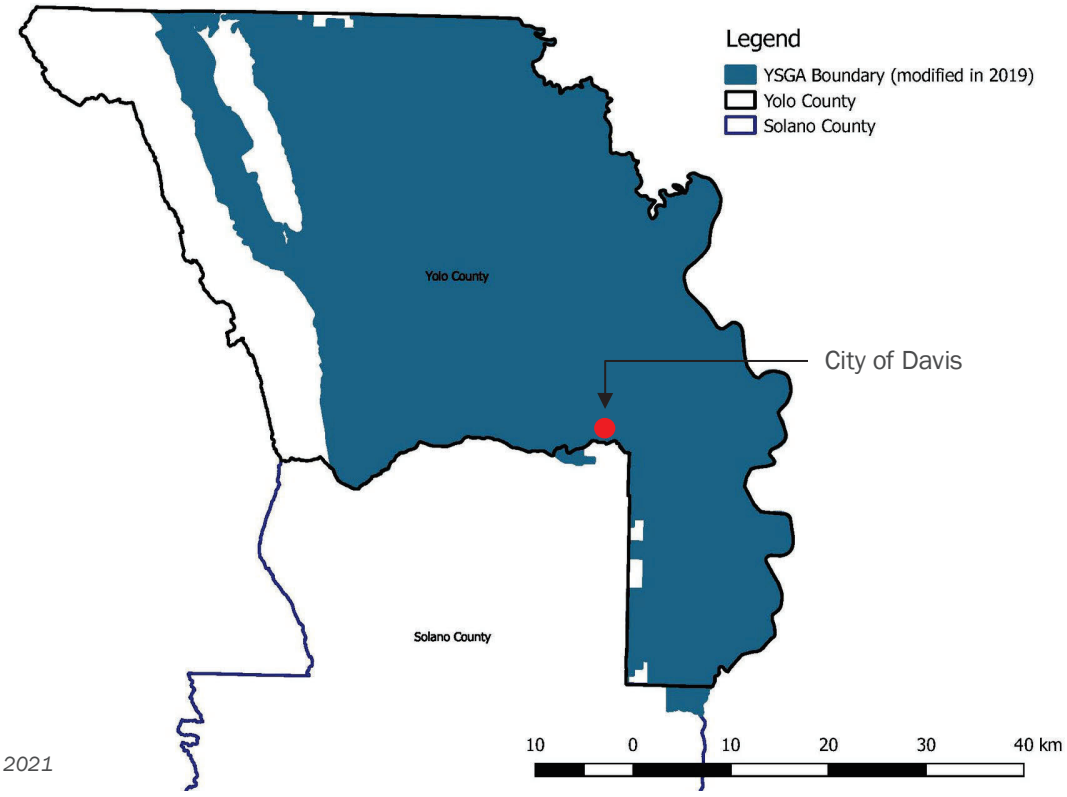
4.2 Groundwater

This section describes the City's groundwater basin, management, historical groundwater use, and projected supply.

4.2.1 Basin Description

The City pumps groundwater from the Sacramento Valley groundwater basin, Yolo Subbasin, 5-021.67. The Yolo Subbasin is not adjudicated and there are no legal restrictions to groundwater pumping. DWR Bulletin 118 does not consider the basin to be in overdraft. The Yolo Subbasin Groundwater Authority (YSGA) submitted a Basin Boundary Modification Request to DWR on September 14, 2018, and on November 29,

2018, DWR released the draft Basin Boundary Modification Results. The Basin Boundary Modification incorporated Reclamation Districts 150, 307, and 999 into the Yolo Subbasin and the boundary as of 2019 is shown on Figure 4-1 (YSGA, 2021). Other municipal water users of the subbasin are the Cities of Woodland and Winters, UCD, the County of Yolo which includes various community services districts and areas, and the Yolo County Flood Control and Water Conservation District (YCFC&WCD). Areas outside of the cities and community service districts are predominantly agriculture. Most agricultural areas to the north of the City use groundwater while other agricultural users are able to use surface water from the Sacramento River, Colusa Basin Drain, Putah Creek, Cache Creek, Yolo Bypass, Tule Canal, Willow Slough, and the Tehama-Colusa Canal (Yolo County, 2009).



Source: YSGA, 2021

Figure 4-1. Groundwater subbasin (Subbasin 5-21.67)

Per the YSGA Groundwater Sustainability Plan (YSGA, 2022) (GSP), the aquifer system under the Yolo Subbasin consists of alluvium and the upper Tehama Formation and can be described by dividing the aquifer into three zones, shallow, intermediate, and deep zones. The City's major groundwater production zones for water supply are the "intermediate aquifer" and "deep aquifer". The distinction is based on water chemistry, even though both are geologically part of the larger Tehama Formation. The "intermediate aquifer" begins at about 200 feet and the "deep aquifer" at 700 feet below ground surface (bgs). Groundwater in the "deep aquifer" is more desirable for household use having low concentrations of nitrate and selenium and only moderate hardness. The groundwater from the "intermediate aquifer" is more suitable for irrigation water use.

Overall, there is high-quality water in the portion of the aquifer that public community water systems draw from (YSGA, 2022). However, community water systems encounter boron, hexavalent chromium, nitrate, and salinity as primary constituents of concern (YSGA, 2022).

The projected sustainable yield for the Yolo Subbasin of 346,000 AFY is expected to be met in the future by collaboration of all YSGA entities through management actions to ensure beneficial use is protected.

The City conducted a regional and local hydrology study to be used in the evaluation of the potential applicability of ASR in November 2019 (GEI, 2019). This study focused on groundwater levels and trends primarily within the "intermediate aquifer". There is some seasonal variation with the depth to water which is typical of groundwater. Seasonal variations show the shallowest levels in the spring (March/April) with depth to water typically greatest in summer (July/August). The City tracks groundwater levels in the intermediate and deep wells. The depth to water seemed greatest from 2013-15, and 2021 through 2022 during the recent droughts. Groundwater levels rebounded after 2015 in conjunction with the start of conjunctive use. The groundwater levels were noted to then have been at consistent levels from 2018-2020 and have since rebounded again after noted wet seasons in 2021 through 2023. The Yolo Subbasin is a relatively stable basin, with groundwater levels maintaining a relatively consistent long-term average elevation or depth to groundwater (YSGA, 2022). Groundwater levels decline during dry conditions due to continued reliance on groundwater for agricultural and municipal demands though there is reduced recharge from precipitation, local runoff, and seepage. However, groundwater levels substantially recover during wet years (YSGA, 2022).

4.2.2 Groundwater Management and SGMA

SGMA was enacted by the legislature in 2014, with subsequent amendments in 2015. SGMA requires groundwater management in priority groundwater basins, which includes the formation of Groundwater Sustainability Authorities (GSA) and the development of GSPs for groundwater basins or subbasins that are designated by DWR as medium or high priority.

Since 2017, groundwater sustainability of the Yolo Subbasin has been managed by the Yolo Subbasin Groundwater Agency (YSGA), the subbasin's GSA. The YSGA is a joint powers authority comprised of twenty members (including the City) and six affiliated parties and is responsible for overall management of the YSGA including implementation of the Sustainable Groundwater Management Act (SGMA) and YSGA's Groundwater Sustainability Plan (GSP) (YSGA, 2022). On March 26, 2018, YSGA submitted an Initial Notification to DWR as the exclusive GSA to develop a single GSP for the Yolo Subbasin. The GSP was adopted on January 24, 2022. The GSP documents the basin's monitoring conditions, establishes management criteria to avoid undesirable results, and identifies potential actions to achieve and maintain sustainable groundwater management by 2042 (YSGA, 2022).

"The sustainability goals for the Yolo Subbasin are as follows:

- Achieve sustainable groundwater management in the Yolo Subbasin by maintaining or enhancing groundwater quantity and quality through the implementation of projects and management actions to support beneficial uses and users.
- Maintain surface water flows and quality to support conjunctive use programs in the Subbasin that promote increased groundwater levels and improved water quality.
- Operate within the established sustainable management criteria and maintain sustainable groundwater use through continued implementation of a monitoring and reporting program.
- Maintain sustainable operations to maintain sustainability over the implementation and planning horizon. (YSGA, 2022)"

As noted on DWR's Sustainable Groundwater Management Act (SGMA) Portal in the GSP Status Summary, the Yolo Subbasin's GSP was approved by DWR on October 26, 2023 (DWR, 2023).

On the whole, coordination of groundwater resources in Yolo County occurs through the Water Resources Association of Yolo County (WRA), which is a consortium of local water agencies that provide a regional forum to coordinate and facilitate water issues in Yolo County. The YCFC&WCD often acts as the lead agency

for permitting purposes, manages groundwater monitoring, and updates the Integrated Groundwater Surface Model, a computer simulation of the aquifer in Yolo County.

The California Statewide Groundwater Elevation Monitoring (CASGEM) program established a permanent, locally-managed program of regular and systematic monitoring in all of California's alluvial groundwater basins. CASGEM was developed in response to legislation enacted in California's 2009 Comprehensive Water package. The WRA is the monitoring entity for the Yolo Subbasin. They submit regular monitoring reports of groundwater elevations to DWR.

The designation of the priority of groundwater basins was completed as part of the CASGEM Program. The CASGEM Groundwater Basin Prioritization is a statewide ranking of groundwater basin importance that incorporates groundwater reliance and focuses on basins producing greater than 90 percent of California's annual groundwater (DWR, 2016e). The Basin prioritization ranked the Yolo Subbasin (5-21.67) as high priority. SGMA directs DWR to identify groundwater basins and subbasins in conditions of critical overdraft. DWR identified such basins in Bulletin-118-80 completed in 1980 and Bulletin 118, Update 2003. DWR issued an updated draft list of critically overdrafted basins in July 2015. The Yolo Subbasin was not on the list as it is not considered to be in an overdraft condition.

The City began transitioning to conjunctive use in mid-2016 to lessen its reliance on groundwater. Additionally, the City is exploring the feasibility of aquifer storage and recovery (ASR) to improve water quality and increase groundwater supplies during a dry year.

4.2.3 Historical Groundwater Pumping

The amount of groundwater pumped in 2016 through 2022 is shown in Table 4-3. More water is pumped from the deep aquifer via the City's deep groundwater wells than from the intermediate wells.

Table 4-3. Historical Groundwater Volume Pumped, AFY[a, b]

Groundwater Type	Location or Basin Name	2000	2005	2010	2015	2016	2017	2018	2019	2020	2021	2022
Alluvial Basin	Intermediate aquifer, within City service area, Sacramento Valley, Yolo Subbasin (5-21.67)	-	-	-	-	1,550	10	4	3	6	4	4
Alluvial Basin	Deep aquifer, within City service area, Sacramento Valley, Yolo Subbasin (5-21.67)	-	-	-	-	4,890	1,270	2,070	1,300	2,500	3,690	1,240
Total		**14,010**	**14,450**	**11,960**	**9,210**	**6,430**	**1,290**	**2,070**	**1,310**	**2,510**	**3,690**	**1,240**

a. *Source: 2016-2021 from 2023 WSOP (BC, 2024). 2022 from City staff.*
Individual values are rounded to nearest 1 or 10, which may result in some rounding errors in totals.

4.2.4 Projected Groundwater Supply

Table 4-4 summarizes the projected groundwater water supplies for a normal year, a single dry year, and multiple dry years.

Table 4-4. Projected Groundwater Supply, AFY[a, b]				
2025	2030	2035	2040	2045
12,800	12,800	12,800	12,800	12,800

a. *Source: 2023 WSOP (BC, 2024).*

b. *The usable annual deep well capacity based on the simulated demand is 12,800 AFY, which is approximately 70 percent of the deep well total pumping capacity.*

4.3 Projected Recycled Water Supply

As stated in the 2020 UWMP, the City does not currently use recycled water to offset potable water distribution system demand but plans to conduct further evaluation to use recycled water within the City service area. As described in the City's 2023 Integrated Water Resources Study, the City's future uses of recycled water will likely include (City of Davis, 2023):

- Yolo County Central Landfill (YCCL) for dust control, phytoremediation, agricultural irrigation, and truck wash activities and Napa Recycled facility (at the YCCL) for fire protection, irrigation of compost sites, and dust control (adjacent to WWTP) (current demand)
- City of Davis tree watering on City property (current demand)
- Open space irrigation of overland of 160-acre site east of WWTP (current demand, in place)
- Agricultural irrigation of City-owned Howatt Ranch (future demand)

4.4 Total Projected Water Supply

This section summarizes the City's total projected water supplies including the wholesale surface water supplies discussed in Section 4.1 and the groundwater supplies discussed in Section 4.2. Recycled water supplies discussed in Section 4.3 are not included as currently projected uses of recycled water to offset potable demands are minimal. Table 4-5 summarizes the total projected water supplies for a normal year, a single dry year, and a multiple dry year condition.

Table 4-5. Total Projected Water Supplies, AFY[a]							
Water supply sources	Normal Year	Single Dry Year	Multiple Dry Years				
			Year 1	Year 2	Year 3	Year 4	Year 5
Wholesale surface water[b]	10,520	2,460	2,460	2,460	2,460	2,460	2,460
Groundwater[c]	12,800	12,800	12,800	12,800	12,800	12,800	12,800
Total	**23,320**	**15,260**	**15,260**	**15,260**	**15,260**	**15,260**	**15,260**

a. *Individual values are rounded to nearest 10, which may result in some rounding errors in totals.*

b. *See Table 4-2.*

c. *See Table 4-4.*

Section 5

Water Supply to Demand Comparison

This section provides a comparison of normal and dry water year supplies and demand for the City. Water demands are addressed in Section 3 and water supplies are addressed in Section 4. Table 5-1 compares the City's projected normal year water demands to the supplies in five-year intervals through 2045. The water demands represent the City's total projected water demands for the existing water service area (not including UCD but including NDM) plus the proposed Project. The bottom row indicates that there is a surplus of supply for the City's existing service area demand and the demands of the proposed Project in normal years.

Table 5-1. Normal Year Water Demand and Supply Comparison, AFY

Year	2025	2030	2035	2040	2045
Total demand[a]	9,790	11,439	12,091	12,081	12,081
Total supply[b]	23,320	23,320	23,320	23,320	23,320
Supply minus demand	13,530	11,881	11,229	11,239	11,239

a. *See Table 3-9.*

b. *See Table 4-5.*

Table 5-2 provides a projected water supply and demand comparison for single dry years through the year 2045. Surface water supply from WDCWA is expected to decrease from what is available during a normal year. This assumes Term 91 water curtailments to be in effect. The remaining water demand not met by available surface water will be supplied using groundwater. As can be seen in Table 5-2, the City has the supplies to meet single dry year demands of the existing service area and the proposed Project.

Table 5-2. Single Dry Year Water Demand and Supply Comparison, AFY

	2025	2030	2035	2040	2045
Total demand[a]	9,790	11,439	12,091	12,081	12,081
Total supply[b]	15,260	15,260	15,260	15,260	15,260
Supply minus demand	5,470	3,821	3,169	3,179	3,179

a. *See Table 3-9.*

b. *See Table 4-5.*

Table 5-3 provides a projected water supply and demand comparison for multiple dry years through the year 2045. Similar to single dry years, surface water supply from WDCWA is expected to decrease from what is available during a normal year. This assumes Term 91 water curtailments to be in effect. The remaining water demand not met by available surface water will be supplied using groundwater. As can be seen in Table 5-3, the City has the supplies to meet multiple dry year demands of the existing service area and the proposed Project.

Table 5-3. Multiple Dry Years Water Demand and Supply Comparison, AFY

		2025	2030	2035	2040	2045
First year	Total demand[a]	9,790	11,439	12,091	12,081	12,081
	Total supply[b]	15,260	15,260	15,260	15,260	15,260
	Supply minus demand	5,470	3,821	3,169	3,179	3,179
Second year	Total demand[a]	9,790	11,439	12,091	12,081	12,081
	Total supply[b]	15,260	15,260	15,260	15,260	15,260
	Supply minus demand	5,470	3,821	3,169	3,179	3,179
Third year	Total demand[a]	9,790	11,439	12,091	12,081	12,081
	Total supply[b]	15,260	15,260	15,260	15,260	15,260
	Supply minus demand	5,470	3,821	3,169	3,179	3,179
Fourth year	Total demand[a]	9,790	11,439	12,091	12,081	12,081
	Total supply[b]	15,260	15,260	15,260	15,260	15,260
	Supply minus demand	5,470	3,821	3,169	3,179	3,179
Fifth year	Total demand[a]	9,790	11,439	12,091	12,081	12,081
	Total supply[b]	15,260	15,260	15,260	15,260	15,260
	Supply minus demand	5,470	3,821	3,169	3,179	3,179

a. *Individual values are rounded to nearest 10, which may result in some rounding errors in totals.*

b. *See Table 3-9.*

c. *See Table 4-5.*

Figure 5-1 summarizes the City's projected water reliability for existing service area and the Projects in 2045 for all water year types.

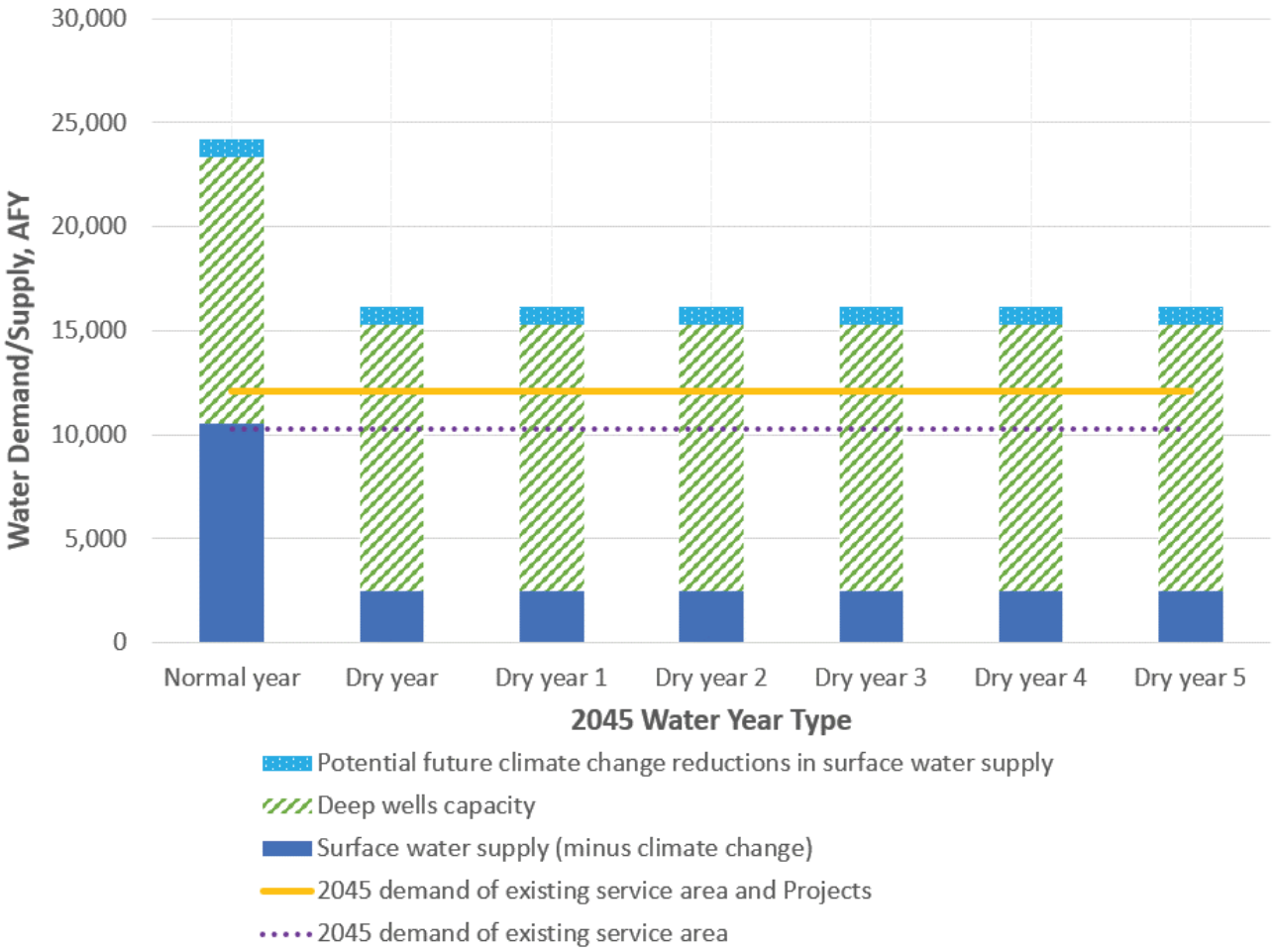


Figure 5-1. 2045 water reliability of the existing service area and the Projects

Section 6

Conclusion

The City Council's approval of this WSA is not equivalent to approval of the Projects for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City's environmental review of a project under the California Environmental Quality Act (CEQA).

In accordance with the requirements of California Water Code sections 10910 through 10915, the WSA has determined that sufficient annual water supplies are available to serve the proposed Projects as well as the projected demands of the City's current service area. This conclusion is based on the availability of water supply for the proposed Projects primarily on the following findings:

- The projected available potable water supplies under non-drought (normal year) and drought (single and multiple dry year) conditions for the City's water system, including the proposed Projects are shown in Table 5-1 (normal year), Table 5-2 (single dry year), and Table 5-3 (multiple dry years). From this information, it was determined that sufficient water supplies are available to serve the proposed Projects.
- Both groundwater and surface water supplies would provide water needed to serve the proposed Projects.

This WSA does not verify the adequacy of the existing distribution system's hydraulic capacity to serve the proposed Projects.

Section 7

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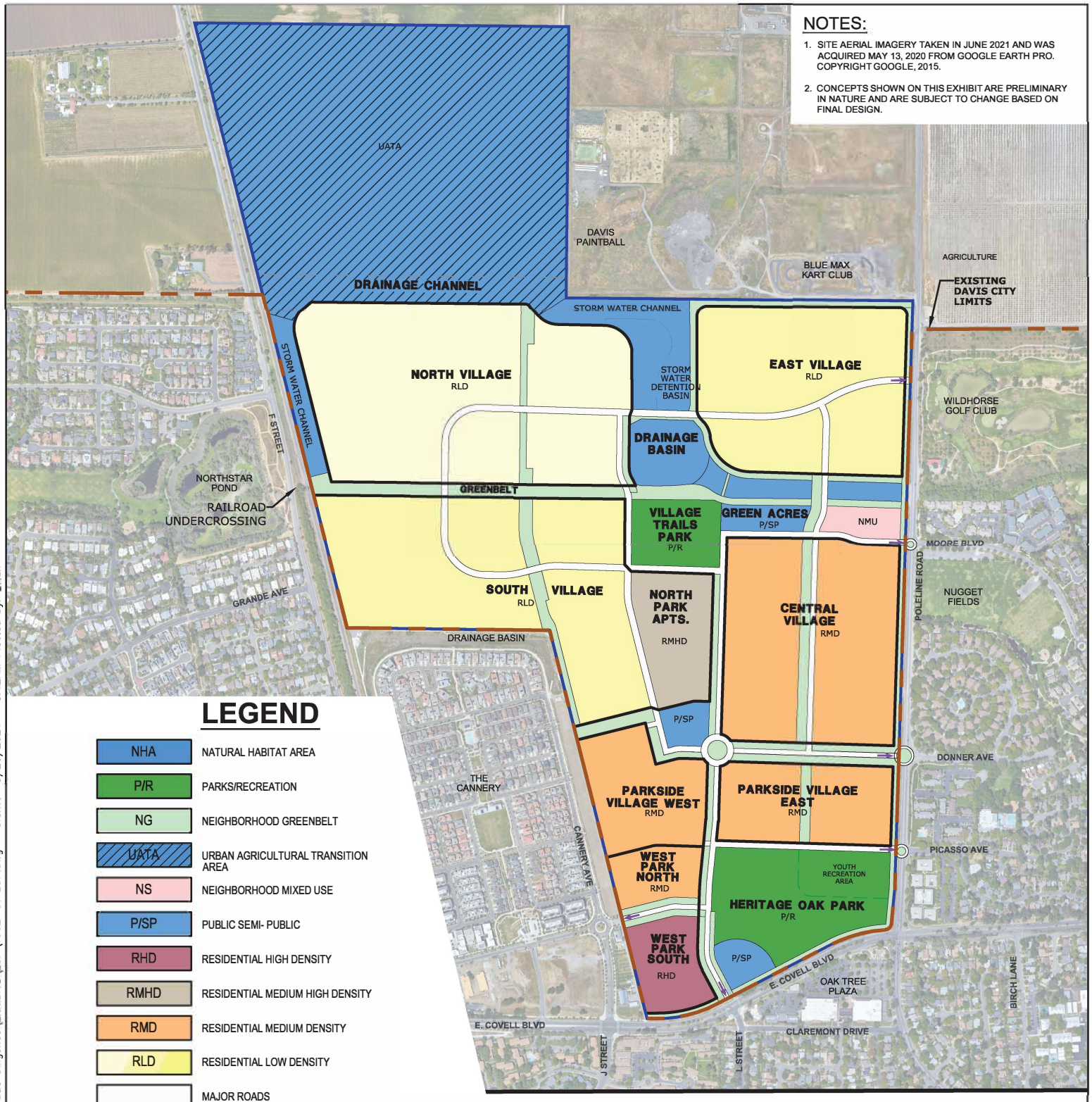
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Appendix A: Village Farms Davis Phasing and Demands



VILLAGE FARMS DAVIS

LAND USE PLAN

DATE: 03/12/24

CUNNINGHAM ENGINEERING

S:\Projects\1900\1902 Village Farms\AutoCAD\1902-01 Due Diligence\EXHIBITS\LUP\1902-01 LUP.dwg – 8.5x11 3/20/2024 – 8:12AM Plotted by: Brian

TABLE W1 Potable Water Demand

Land Use Designation	Land Use	Acres	Dwelling Units	Unit Water Demand [1] (gallons per unit/acre per day)	Unit Fire Flow Demand[2] (gpm)	Average Day Demand (gpd)	Maximum Day Peaking Factor[3]	Maximum Day Demand (gpd)	Peak Hour Peaking Factor [3]	Peak Hour Demand (gpd)	Phase
Park/Open Space	Park/Recreation	27.8	-	2,712	-	75,500	1.8	135,900	1.8	244,600	2
	Neighborhood Greenbelt	39.7	-	2,712	-	107,800	1.8	194,000	1.8	349,200	1 & 2
	Urban Agricultural Transition Area	118.4	-	0	-	0	1.8	0	1.8	0	1
Neighborhood Retail	Neighborhood Retail	2.8	-	2,400	2,500	6,800	1.8	12,200	1.8	22,000	2
Public/Semi-Public	Educational Farm	2.8	-	2,400	2,500	6,700	1.8	12,100	1.8	21,800	2
	City Storm Water Conveyance	25.8		0	-	0	1.8	0	1.8	0	1
	Public Day School	2.4	-	2,400	2,500	5,800	1.8	10,400	1.8	18,700	2
	Public Safety Center	2.5	-	2,400	3,000	6,000	1.8	10,800	1.8	19,400	2
High Density Residential	West Park South	7.9	240	174	3,500	41,800	1.8	75,200	1.8	135,400	1
Medium High Density Residential	North Park Apartments	11.6	200	174	3,500	34,800	1.8	62,600	1.8	112,700	2
Medium Density Residential	Central Village	40.0	320	345	1,000	110,400	1.8	198,700	1.8	357,700	1
	Parkside Village West	15.1	150	345	1,000	51,800	1.8	93,200	1.8	167,800	2
	Parkside Village East	16.1	150	345	1,000	51,800	1.8	93,200	1.8	167,800	1
	West Park North	5.9	60	345	1,000	20,700	1.8	37,300	1.8	67,100	1
Low Density Residential	North Village	64.8	220	345	1,000	75,900	1.8	136,600	1.8	245,900	2
	East Village	39.6	220	345	1,000	75,900	1.8	136,600	1.8	245,900	1
	South Village	53.0	240	345	1,000	82,800	1.8	149,000	1.8	268,200	2
Total		476.3	1,800			754,500		1,357,800		2,444,200	
Major Roadways		21.3									
Project Area Total		**497.7**									

(1) Based on 2023 SB 610 Water Supply Assessment for Village Farms Davis Table 3-4, prepared by Brown and Caldwell
(2) Based on City of Davis Design Standards, Section VIII.B.3
(3) Maximum Day Peaking Factor per 2015 SB610 Water Supply Assessment. Peak Hour Peaking Factor per City of Davis Design Standards

Revised: 03/19/2024

PROJECT LOCATION AND EXISTING USES

The approximately 497.6-acre project site is located north of East Covell Boulevard, east of F Street, and west of Pole Line Road in a currently unincorporated portion of Yolo County, California (see Figure 1 and Figure 2). The project site consists of a 382.72-acre parcel identified by Assessor's Parcel Number (APN) 035-970-033, and a 114.88-acre portion of a larger 169.9-acre parcel (APN 042-110-029) located in the northwest corner of the site. With the exception of APN 042-110-029, the project site is within the City of Davis Sphere of Influence (SOI). The Yolo County General Plan designates APN 035-970-033 as Specific Plan (S-P), and the parcel is similarly zoned S-P by the County. APN 042-110-029 is designated and zoned by the County as Agricultural.

The project site consists of generally flat, agricultural land. In addition, two agricultural structures are located in the southern portion of the site. The project site is bisected by a north-to-south private access road ("L Street"), which also pivots to proceed in an east-to-west direction through a portion of the site. A City of Davis drainage course ("Channel A") also flows east to west through the site. Additionally, a Pacific Gas and Electric Co. (PG&E) easement occurs along the western and northern site boundaries.

SURROUNDING LAND USES

The project site is bounded by Pole Line Road to the east; East Covell Boulevard to the south; the Union Pacific Railroad (UPRR) mainline, F Street, and Cannery development to the west; and Davis Paintball, Blue Max Kart Club, and agricultural land to the north. Other surrounding uses include single- and multi-family residences, the Nugget Fields sports center, Wildhorse Golf Club, and commercial offices to the east, across Pole Line Road; and commercial uses, single- and multi-family residences, and commercial offices to the south, across East Covell Boulevard. It should be noted that the Davis Paintball and Blue Max Kart Club are located at the site of a former landfill.

PROJECT SITE BACKGROUND

On June 13, 2005, Davis City Council certified the Covell Village EIR (State Clearinghouse [SCH] No. 2004062089) and approved the Covell Village Project. The Covell Village Project proposed development of a mixed-use community on approximately 422 acres in Yolo County, California. The Covell Village Project site consisted of APN 035-970-033, similar to the proposed project. However, whereas the currently proposed project includes a 114.88-acre portion of the adjacent northerly parcel, the Covell Village Project encompassed 39 acres of said northerly parcel. The Covell Village Project included a total of 1,864 units, comprised of single- and multi-family residential units, senior-only home sites, and other residential uses. The project also included the development of a 30,000-square-foot (sf) hospice facility in the northern portion of the site, a commercial Village Center, and the dedication of a fire station site and school site. Within the adjacent northerly parcel, the project proposed to convert existing lower-quality agricultural soil into a large riparian area and stormwater detention pond. The Covell Village Project required the following discretionary approvals by the City of Davis:

- Certification of the EIR;
- Approval of a General Plan Amendment, Pre-zoning, and a Preliminary Planned Development;
- Approval of application to the Yolo County Local Agency Formation Commission (LAFCo) for Annexation into the City of Davis;
- Affordable Housing Plan approval; and
- Phased Housing Allocation Plan approval.

Following approval by the Davis City Council, the Covell Village Project required approval by Davis residents before the project could proceed; however, the Covell Village Project ultimately failed to gain the requisite percentage of votes on the ballot, and thus, was not approved.

PROJECT DESCRIPTION

Similar to the Covell Village Project, the currently proposed project would include development of all of APN 035-970-033. However, the proposed project would include annexing an adjacent 114.88-acre portion of APN 042-110-029 providing an expanded agricultural buffer, with the remaining 55.0 acres of the parcel remaining in Yolo County and available for agricultural mitigation purposes.

In general, the proposed project would consist of a mixed-use development community, including a total of 1,800 dwelling units, comprised of both affordable and market-rate single- and multi-family residences, across various residential neighborhoods. In addition, the proposed project would include neighborhood services; public, semi-public, and educational uses; associated on-site roadway improvements; utility improvements; parks, open space, and greenbelts; and off-site improvements.

The Village Farms Davis Project would require discretionary approvals, including an SOI Amendment, Annexation, General Plan Amendment, Pre-Zoning, and Development Agreement. The project will also include a Baseline Project Features agreement into which the developer will enter and be bound by to ensure inclusion of the agreed-to project features. The project components are discussed further below.

Sphere of Influence Amendment and Annexation

As previously discussed, the project site is currently located in an unincorporated portion of Yolo County. While APN 035-970-033 is located within the City of Davis SOI, the 114.88-acre portion of the project site identified by APN 042-110-029 is located outside of the City's SOI. Thus, the proposed project includes a request to amend the Davis SOI to adjust the City's SOI boundary lines to include the aforementioned 114.88 acres (see Figure 3). The project also includes a request to annex the 497.6-acre project site which encompasses a 118.4-acre (114.88 on APN 042-110-029 and 3.52 acres on APN 035-970-033) UATA (aka Ag Buffer) and 379.2-acre Urban Development into the City of Davis (see Figure 3). It should be noted that the SOI Amendment and Annexation are ultimately subject to approval by the Yolo Local Agency Formation Commission (LAFCo), which would serve as a responsible agency. The City of Davis would be responsible for approving a resolution authorizing the project applicant to submit an SOI Amendment and Annexation application to Yolo LAFCo.

General Plan Amendment

The majority of the project site (APN 035-970-033) is designated by Yolo County as S-P, with the 114.88 portion of the site (APN 042-110-029) designated by the County as Agricultural (see Figure 4). The proposed General Plan map amendment would redesignate the project site with City of Davis land use designations, consistent with the uses proposed as part of the project, which are discussed further below.

Pre-Zoning

Corresponding with the project site's current Yolo County land use designations, the site is zoned by Yolo County as S-P and Agricultural (see Figure 5). Following annexation into the City limits, the project site would be prezoned to the City's Planned Development (P-D) zone. The P-D zoning designation is intended to allow for greater flexibility from the development standards established for the City's conventional zoning districts. As part of approval of the Pre-zoning to P-D, the proposed project would be required to

adhere to the development standards set forth by the Preliminary P-D (PPD) and included in the Development Agreement, which would also be subject to City approval.

According to Davis Municipal Code Section 40.22.060, the P-D for the Village Farms Davis Project must contain basic information, such as land uses proposed for the zone, location of parks and trails, proposed street layout, and a preliminary study of facilities required, such as drainage, sewage, and public utilities. The components of the P-D proposed for the Village Farms Davis Project are discussed further below.

Residential Neighborhoods

As previously noted, the proposed project would consist of a mixed-use development community, including a total of 1,800 dwelling units. The residential units would be developed across the nine villages within the project site. The proposed villages would consist of Residential Low Density (RLD), Residential Medium Density (RMD), Residential Medium High Density (RMHD), and Residential High Density (RHD) neighborhoods, as summarized in Table 1 and Table 2.

Table 1
Proposed Residential Uses

Proposed Land Use Designation	Neighborhood	Land Use Type	Units	Acres
Residential Low Density	North, East, and South Villages	Market-Rate Single-Family Units and Duplexes	680	157.4
Residential Medium Density	Central Village and Parkside Village East	Starter Single-Family Units, Townhomes, and Cottages	470	56.1
	Parkside Village West	Condominiums and Stacked Flats	150	15.1
	West Park Village North	Affordable Multi-Family Units	60	5.9
Residential Medium High Density	North Park Apartments	Market-Rate Apartments	200	11.6
Residential High Density	West Park Village South	Affordable Multi-Family Units	240	7.9
Totals			**1800**	**254.0**

Table 2
Proposed Non-Residential Uses

Proposed Land Use Designation	Land Use Type	Acres
Neighborhood Mixed-Use	Neighborhood Services	2.8
Public/Semi Public	Emergency Services Community Center	2.5
Public/Semi Public	Pre-K Early Learning Center	2.4
Public/Semi Public	Educational Farm	2.8
Parks/Recreation	Heritage Oak Park	20.3
Parks/Recreation	Village Trails Park	7.5
Public Semi Public	City Storm Water Conveyance	25.8
Urban Agricultural Transition Area	Urban Agricultural Transition Area	118.4
Neighborhood Greenbelt	Greenbelts	39.7
N/A	Roads	21.3
Total		**243.6**

Residential Low Density

The North, East, and South Villages, in total, would consist of a combined 680 market-rate single-family residential and duplex units. The North and East Villages would be located in the northernmost portion of the project site. The South Village would be developed immediately south of the North Village and adjacent to the site's western boundary. Units within the North, East, and South Villages would be targeted towards small developers and individuals seeking to design and contract the construction of their homes. Initially, the project applicant would sell the lots through a lottery-style selection process. The maximum number of lots purchased by a single buyer could be restricted to a specified total.

All three villages would be designated RLD, which allows for single-family detached homes, duplexes, and accessory dwelling units (ADUs) at density of 2.40-4.79 gross dwelling units per acre (du/ac) and an estimated net density of 3.60-7.19 du/ac. As detailed in the Preliminary P-D prepared for the proposed project, permitted uses within the North, East, and South Villages would be those allowed in the Residential One-Family (R-1) zoning district, as set forth by Davis Municipal Code Article 40.03. Accordingly, units within the North, East, and South Villages would be constructed in accordance with the applicable development standards established therein, including, but not limited to, those related to building height, lot area and width, open space, and yard requirements.

Residential Medium Density

The proposed RMD units would include "starter" single-family residences, affordable multi-family units, as well as market-rate townhomes, cottages, condominiums, and stacked flats. These unit types are discussed further below.

Market-Rate Residences

Central Village and Parkside Village East would consist of 470 single family residences, townhomes and cottages. Up to 310 of the single-family residences within Central Village and Parkside Village East would be "starter" homes, defined as affordable-by-design, detached homes developed and sold through a Developer Contribution Program (DCP). More specifically, the DCP would provide 15 percent of the market rate home cost, which would be coupled with the homebuyer's five percent down payment to meet the required 20 percent down payment. The starter homes would be targeted towards the Davis workforce, families with children in Davis schools, and other industry-standard qualifying buyers. At the time of resale 15 percent of the home value will be contributed to, and used by, a non-profit housing trust, to benefit future down payment assistance and other affordable housing programs in the City of Davis.

Central Village and Parkside Village East would be designated RMD, which allows for both detached and attached residences (including cottages and townhouses) at a density range of 4.80 to 11.20 gross du/ac and an estimated net density of 7.20 to 16.79 du/ac. Pursuant to the proposed Preliminary P-D, permitted uses within Central Village and Parkside Village East would be those allowed in the Residential One- and Two-Family (R-2) zoning district, as set forth by Davis Municipal Code Section 40.09.020. The units would be constructed in accordance with the applicable development standards established therein, including, but not limited to, those related to building height, lot area and width, and yard requirements.

In Parkside Village West, there will be a total of 150 multi-family residential units, comprised of condominiums and stacked flats. The residences within Central Village, Parkside Village East, and Parkside Village West would be developed at a density consistent with the RMD designation and in accordance with the permitted uses and applicable development standards established for the R-2 zoning district.

Affordable Multi-Family Residences

The West Park North Village would be located in the southwest corner of the project site to the north of East Covell Boulevard. West Park Village North would consist of 60 affordable multi-family residential units restricted for households meeting the definitions established by Davis Municipal Code Section 18.05.020 of extremely low-income households.

Pursuant to the proposed project's PPD, permitted uses within the West Park North Village would be those allowed in the R-HD zoning district, as set forth by Davis Municipal Code Section 40.09.020. The units would be constructed in accordance with the applicable development standards established therein.

Residential Medium High Density

The proposed RMHD units would include market-rate residences, which are discussed further below.

Market-Rate Residences

The centrally located North Park Apartments would consist of 200 market-rate apartment units. The North Park Apartments neighborhood would be designated RMHD. The RMHD land use designation allows for a density range of 11.21 to 19.99 gross du/ac and an estimated net density of 16.80 to 29.99 du/ac. Pursuant to the proposed project's PPD, permitted uses within the North Park Apartments neighborhood would be those allowed in the R-HD zoning district, as set forth by Davis Municipal Code Section 40.09.020. The multi-family residential units would be constructed in accordance with the applicable development standards established therein.

Residential High Density

The proposed RHD units would include affordable multi-family units, which are discussed further below.

Affordable Multi-Family Residences

The West Park South Village would be located in the southwest corner of the project site to the north of East Covell Boulevard. The West Park South Village would consist of 240 affordable multi-family residential units restricted for households meeting the definitions established by Davis Municipal Code Section 18.05.020 of low- and very low-income households.

The West Park South Village would be designated RHD, which allows for various types of multi-family residences, such as apartments, condominiums, and stacked flats. The RHD land use designation allows for a density range of 20.00 to 39.99 gross du/ac. Net and gross are shown to be equivalent, as it is assumed that the common area for the high-density apartment uses is included in the net area calculation. Pursuant to the proposed project's PPD, permitted uses within the West Park South Village would be those allowed in the Residential High Density Apartment (R-HD) zoning district, as set forth by Davis Municipal Code Section 40.09.020. The units would be constructed in accordance with the applicable development standards established therein.

Neighborhood Mixed Use

The proposed project would include 2.8 acres of Neighborhood Mixed-Use immediately to the north of the Central Village and adjacent to Pole Line Road, which would be developed to serve existing neighborhoods and future residents of the proposed project. In consultation with City leadership, interested neighbors and the business community, additional details for this site will be drafted for inclusion in the Planned

Development (zoning) for the project. The goal is to have services in this area not currently offered in the area, such as EV charging stations, space for mobile blood drives, mobile veterinary services, offering free spayed and neutering, SPIN rideshare parking, etc.

Public, Semi-Public, and Educational Uses

The proposed project would include a total of 33.5 acres of pubic, semi-public, and educational uses, including 2.5 acres planned for development of a Fire Station and Emergency Services Community Center (ESCC), 2.4 acres for a Davis Joint Unified School District (DJUSD) Pre-kindergarten (Pre-K) Early Learning Center, 2.8 acres for an Educational Farm, and 25.8 acres for City Storm Water Conveyance. Each of the aforementioned project components would be designated Public/Semi-Public (P-SP) and would be consistent with the permitted uses and development standards set forth by Davis Municipal Code Article 40.20A.

The new ESCC would be located in the southern portion of the project site, adjacent to East Covell Boulevard and would include a new fire station, which would improve the emergency response time for underserved homes throughout North Davis that are currently outside of the Davis Fire Department's recommended five-minute response time standard. In addition, the ESCC would serve as a joint-use facility for emergency services such as fire protection, emergency medical, and police personnel. Furthermore, the ESCC could potentially include training facilities, a City Emergency Operations Center, and a venue for community events. The ultimate mix of uses for this center will be determined in collaboration with the City departments, County and community at large.

The new DJUSD Pre-K Early Learning Center would be centrally located in the lower half of the project site, immediately south of the North Park Apartments and west of the Central Village. The Pre-K Early Learning Center is anticipated to offer the combined services of preschool and daycare with early education curriculum and childcare. Additional details for the Pre-K Early Learning Center would be finalized through consultation with the DJUSD and included in the proposed project's Development Agreement.

Finally, the Educational Farm, tentatively proposed as "Green Acres," would be located in the northeast portion of the project site, south of the East Village. The Educational Farm would be used for the purposes of teaching agricultural values and methods in a hands-on, early learning outdoor classroom environment and dedicated to the DJUSD. Additional details for the Educational Farm would be finalized through consultation with the DJUSD and included in the proposed project's Development Agreement.

Access and Circulation

Primary site access would be provided from Pole Line Road and East Covell Boulevard (see Figure 6 and Figure 7). From East Covell Boulevard, L Street would be extended into the site in a north-to-south direction. In addition, from Pole Line Road, Moore Boulevard, Donner Avenue, and Picasso Avenue would be extended into the site in an east-to-west direction. An additional entrance from Pole Line Road would be constructed in the northeast portion of the site, providing access to a new street that would extend westward through the proposed East Village. Overall, the proposed internal streets would connect to form a semi-grid pattern within the project site. The majority of internal streets would consist of 49-foot-wide rights-of-way (ROWs), each comprised of two 10-foot-wide vehicle lanes, on-street parking lanes with a maximum width of seven feet, and six-foot-wide attached sidewalks along each side of the street. The proposed project includes two additional street cross-sections illustrated in Figure 7. In addition, the applicant is proposing to construct new roundabouts on Pole Line Road, which are discussed further under the Off-Site Improvements subheading below.

The proposed project would include a multimodal network of bikeways, sidewalks, and transit stops (see Figure 8). With respect to bicycle facilities, the proposed project would include Class I, II, and III bikeways within the project site. Class I bike paths are off-street and provide travel lanes for bicyclists that are separated from motorists. Class II bike lanes are on-street but separated from vehicle lanes through marked striping and other methods. Class III bike lanes share the path with vehicles. The on-site Class I bike paths would primarily coincide with the proposed greenbelts (discussed further under the Parks, Open Space, and Greenbelts subheading below) and would provide a six-foot-wide travel lane in each direction for a total travel width of 12 feet. The Class II and III bikeways are anticipated to be located in on-site areas of lighter vehicle travel. Overall, the bikeways would provide interconnected access to all areas within the project site. Additionally, the applicant is pursuing two grade separated under-crossings near the Pole Line Road/Moore Boulevard and F Street/Anderson Road intersections, allowing the proposed internal bikeway network to act as the missing link to the wider Davis Bike Loop, which currently ends at the eastern and western project site boundaries at Moore Boulevard and Anderson Road, respectively. Ultimately, the feasibility of the crossings will depend on UPRR & City of Davis limitations, landing constraints, impacts to the surrounding area and other unforeseen challenges.

With respect to pedestrian access, as previously discussed, the internal street network would include eight-foot-wide sidewalks. In addition, the approximately three miles of on-site Class I bike paths would be multi-use pathways that would be shared with pedestrians.

With respect to transit, Unitrans provides public transportation service to the entire City through 18 routes and 48 buses. In addition, Yolobus provides public transportation services throughout Yolo County, as well as into downtown Sacramento, western Sacramento County, and northeastern Solano County. Eight public transit stops are located adjacent to the project site at the intersections of East Covell Boulevard/J Street, Pole Line Road/East Covell Boulevard, Pole Line Road/Picasso Avenue, Pole Line Road/Donner Avenue, Pole Line Road/Moore Boulevard, Anderson Road/Sandpiper Drive, F Street/Grande Boulevard, and J Street/Cranbrook Court. The aforementioned stops are serviced by Unitrans lines P, Q, L, T, F, and E. Four of the existing stops (East Covell Boulevard/J Street, Pole Line Road/East Covell Boulevard, Anderson Road/Sandpiper Drive, and F Street/Grande Boulevard) are also included on the Yolobus 43 and 230 routes. In addition, the proposed project would include installation of a new bus stop at the East Covell Boulevard/L Street intersection.

Utilities

The proposed project would include utility improvements related to water, sanitary sewer, and storm drainage services, which are discussed further below.

Water

Water service would be provided by the City of Davis through new connections to the existing water system. In the immediate project vicinity, East Covell Boulevard contains an existing 10-inch line and Pole Line Road contains an existing water line that ranges in diameter from 10 inches to 12 inches (see Figure 9). From the existing water lines in East Covell Boulevard and Pole Line Road, new eight-inch, 10-inch, and 12-inch water lines would be installed and extended into the project site within the new on-site internal streets. From the new water lines, water service would be provided to each structure through new water laterals. All new water infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

Sewer

Sanitary sewer service would be provided by the City of Davis through new connections to the existing sewer system. As shown in Figure 10, an existing 42-inch sewer line traverses through the project site in a

north-to-south direction and pivots towards the east along the northern site boundary. New eight-inch, 10-inch, and 12-inch sewer lines would be installed and extended into the project site within the new on-site internal streets. From the new sewer lines, sewer conveyance services would be provided to each structure through new sewer laterals. All new sewer infrastructure would be designed consistent with the applicable standards established by the City of Davis Public Works Department Standard Specifications.

Storm Drainage

Storm drainage service would be provided by the City of Davis through new connections to the existing system, improvements to the existing Channel A, and new storm drainage features. The project site is located within the Covell Drain Watershed, which consists of a 17-square-mile area. The Covell Drain/Channel A currently routes through the project site, entering at the northwest corner of the site through existing box culverts, then routes south along the UPRR tracks comingling with the stormwater flows from the F Street Channel. The Covell Drain Channel then continues east through the central portion of the project site as Channel A, continuing to Pole Line Road where the drainage channel passes under the road in an existing box culvert and flows through the Wildhorse Golf Club course. The channel ultimately discharges to Willow Slough Bypass to the northeast of the City.

As part of the proposed project, Channel A would be rerouted from the northwest corner of the project site to convey flows along the northern site boundary to a new stormwater detention basin, which would be located between the North and East Villages (see Figure 11). The overall depth of the detention basin would be approximately nine feet with a bottom elevation of 18 feet, as part of an estimated 29 acre-feet (AF) storage volume for storm water quality. From the new detention basin to Pole Line Road, Channel A would be expanded and have a drainage capacity equivalent to the existing flows tributary to the Wildhorse Channel. An additional channel will be constructed on the northern boundary of East Village allowing larger storm events to overtop Poleline Road and flow to the northeast, matching the existing flow conditions in a rare 100-year, 10-day storm event. The Urban Agricultural Transition Area (UATA) is proposed to extend 2000-feet to the north between F Street and the Davis Paintball/Blue Max Kart Club. This expanded UATA is well above the City minimum requirement of 150 feet and will be excavated nine to ten feet, creating a natural vegetation and wildlife area. Soil excavations from this area will be utilized for onsite fill within the urban development to elevate the pads above the flood plain, as required. This will eliminate nearly all off-site transport of fill and greatly reduce emissions during construction.

In addition, the proposed project would install Low Impact Development (LID) measures throughout the project site to provide stormwater quality treatment. The LID measures are anticipated to include both volume-based BMPs (e.g., bioretention, infiltration features, pervious pavement, etc.) and flow-based BMPs (e.g., vegetated swales, stormwater planter, etc.). The use of the features would be dependent upon location and setting within the project. The BMPs would be designed in accordance with the stormwater quality control standards established by Davis Municipal Code Article 30.03. From the LID measures as well as new impervious surfaces within the project site, flows would be conveyed to new storm drain lines installed in the new on-site internal streets, which would convey flows to the new detention basin.

It should be noted that portions of the project site are located in areas designated by the Federal Emergency Management Agency (FEMA) as Zone A, which is a Special Flood Hazard Area. As such, replacement of existing on-site runoff storage lost due to development of the proposed project may need to be provided on-site within the proposed perimeter storm drainage system.

Dry Utilities

Electricity service would be provided to the project site by Pacific Gas and Electric Co. (PG&E) and Valley Clean Energy (VCE) through connection to existing infrastructure in the project vicinity along East Covell

Boulevard and Pole Line Road. The proposed project would not use natural gas. Telecommunication services, such as telephone and internet services, would be provided by Xfinity and/or other providers through connection to existing infrastructure.

Parks, Open Space, and Greenbelts

The proposed project would include a total of approximately 186.0 acres of parks, open space, and greenbelts, including the Heritage Oak Park and Village Trails Park, natural vegetation areas along Channel A (including the agricultural buffer), and the greenbelts (see Figure 12).

The approximately 20.3-acre Heritage Oak Park would be located in the southern portion of the project site, adjacent to East Covell Boulevard and would include children's play fields, a playground, open turf areas, and hardcourts. In addition, the park would include covered picnic/pavilion areas, an oak grove, pond, a meadow, and flower/pollinator gardens. The approximately 7.5-acre Village Trails Park would be centrally located immediately north of the North Park Apartments and feature playfields, playgrounds, open turf areas, and quiet areas to rest.

Along the northwestern boundary, the realigned Channel A would coincide with a portion of the UATA with additional UATA to the north totaling 118.4 acres between the project site and agricultural land to the north. As established by Davis Municipal Code Section 40A.01.050(b), the UATA would have a minimum width of 150 feet; however, the project proposes to expand this to 2,150 feet. It should be noted that an existing UATA buffer is located adjacent to the Cannery Farm and Cannery Subdivision and includes demonstration gardens, community space, and a drainage corridor along the Cannery frontage. The proposed project would not result in modifications to the existing UATA.

Finally, the proposed project would include approximately 39.7 acres of greenbelts. Generally, the 50-foot-wide greenbelts would occur along portions of all the project site's boundaries, as well as adjacent and/or within the proposed residential villages. The greenbelts would coincide with the Class I multi-use pathway and include new landscaping vegetation and habitat restoration.

Off-Site Improvements

The proposed project would include various off-site improvements, including, but not necessarily limited to, new roundabouts along Pole Line Road, a new traffic signal at the East Covell Boulevard/L Street intersection, and two grade-separated undercrossings traversing F Street/UPRR and Poleline Road. Ultimately, the feasibility of the crossings will depend on UPRR & City of Davis limitations, landing constraints, impacts to the surrounding area and other unforeseen challenges.

The applicant is proposing to construct three new roundabouts along Pole Line Road at the road's intersections with Moore Boulevard, Donner Avenue, and Picasso Avenue, which would provide speed control. The ultimate design of the roundabouts, as well as the installation of the new traffic signal at the East Covell Boulevard/L Street intersection, would be developed in cooperation with traffic engineers and the City of Davis Public Works Department.

Portions of APN 042-110-029 would also be used as part of the proposed project's conservation of agricultural land to comply with the City's farmland preservation requirements established by Davis Municipal Code Article 40A.03 (see Figure 13). The land would be dedicated in the form of a permanent conservation easement through the City's Open Space Program.

Project Phasing

Development of the proposed project is anticipated to occur over the course of four phases, which are generally discussed below (see Figure 14).

Phase 1

Phase 1 is anticipated to include development of the following:

- West Park North (60 affordable, medium-density, multi-family residential units);
- West Park South (240 affordable, high-density, multi-family residential units);
- Central Village and Parkside Village East (470 medium-density homes consisting of Starter single-family homes, Townhomes and Cottages);
- East Village (220 market-rate low-density residential units);
- The UATA;
- Greenbelts along Pole Line Road, East Covell Boulevard, and the adjoining City-owned property to the north of the project site;
- Internal greenbelts and trails.

In addition, Phase 1 would include the installation of water, sewer, and storm drain infrastructure within existing and proposed roadways, as well as electrical and communication infrastructure. Phase 1 would also include the relocation and expansion of Channel A.

Phases 2, 3, and 4

Phases 2, 3, and 4 is anticipated to include development of the following:

- North Park Apartments (200 market-rate medium-high-density residential units);
- Parkside Village West (150 medium-density residential units);
- North and South Villages (460 low-density residential units)
- Heritage Oak Park;
- Village Trail Park;
- Internal greenbelts and trails;
- Perimeter greenbelts along the site's southern boundary;
- Fire station and ECC;
- Pre-K Early Learning Center;
- Neighborhood Services; and
- "Green Acres" Educational Farm.

Similar to Phase 1, Phases 2, 3, and 4 would include the installation of water, sewer, and storm drain infrastructure within existing and proposed roadways, as well as electrical and communication infrastructure. Grade-separated undercrossings at Pole Line Road and Moore Boulevard would be installed and the Davis Bike Loop would be completed during Phases 2, 3, and 4.

Development Agreement

A Development Agreement between the applicant and the City of Davis would be included as part of the proposed project, which would allow the City and the applicant to enter into an agreement to assure the City that the proposed project would be completed in compliance with the plans submitted by the applicant, and assure the applicant of vested rights to develop the project.

REQUESTED ENTITLEMENTS

The following section presents the discretionary and ministerial actions that would be required to implement the proposed project.

City of Davis Discretionary Approvals

Implementation of the proposed project would require the following entitlements from the City of Davis:

1. Certification of the EIR and adoption of the Mitigation Monitoring Plan. Before the City can approve the proposed project, the City must certify that the EIR was completed in compliance with the requirements of CEQA, that the decision-making body has reviewed and considered the information in the EIR, and that the EIR reflects the independent judgment of the City of Davis. Approval of the EIR also requires adoption of a Mitigation Monitoring Plan (MMP), which specifies the methods for monitoring mitigation measures required to eliminate or reduce the project's significant effects on the environment. The City would also be required to adopt Findings of Fact, and for any impacts determined to be significant and unavoidable, a Statement of Overriding Considerations, as part of project approval.
2. SOI Amendment. Because the 114.88-acre portion of the proposed project is outside the City's SOI, the proposed project would require an SOI Amendment to include that portion of APN 042-110-029 within the City's SOI.
3. Annexation. The proposed project would require the annexation of the 497.6-acre project site into the City of Davis.
4. General Plan Amendment. The proposed project would require a General Plan Amendment to redesignate the 497.6-acre project site from Yolo County General Plan land use designations of S-P (382.72 acres) and Agricultural (114.88 acres) to the following City of Davis land use designations:
    - 157.4 acres of RLD;
    - 77.2 acres of RMD;
    - 11.6 acres of RMHD;
    - 7.9 acres of RHD;
    - 33.5 acres of P-SP;
    - 2.8 acres of Neighborhood Mixed-Use;
    - 27.8 acres of Park/Recreation;
    - 39.7 acres of Neighborhood Greenbelt; and
    - 118.4 acres of UATA.
5. Pre-Zoning. The proposed project would require Pre-zoning of the site from the Yolo County zoning designations of S-P (382.72 acres) and Agricultural (114.88 acres) to the City of Davis zoning of PD.
6. Development Agreement.

Responsible Agency Approvals[1] – Yolo Local Agency Formation Commission

The proposed project would require the following approvals from Yolo LAFCo as part of the requested SOI Amendment and Annexation:

[1] Pursuant to CEQA Guidelines Section 15381, a "Responsible Agency" means a public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency which have discretionary approval power over the project.

1. Combined Municipal Service Review (MSR) and SOI Amendment in order to bring the 114.88-acre portion of APN 042-110-029 within the City of Davis SOI (Government Code Section 56428).
2. Annexation of the entire 497.6-acre project site into the City of Davis (Government Code Section 56737).

Other Agency Permits and Approvals

The proposed project would not require additional agency approvals and permits until such time that the project applicant receives approval of additional discretionary entitlements from the City of Davis, thereby enabling on-site construction. At this later stage, subsequent to City of Davis approval of a final P-D and Tentative Subdivision Map(s), the following agency approvals and permits would likely be required for the project:

1. National Pollutant Discharge Elimination System (NPDES) Construction General Permit – Central Valley Regional Water Quality Control Board (RWQCB).
2. NPDES Phase II Small MS4 General Permit – Central Valley RWQCB.
3. Section 404 Nationwide Permit (or Letter of Permission) – U.S. Army Corps of Engineers (USACE).
4. Section 401 Water Quality Certification – Central Valley RWQCB.
5. Section 1602 Lake or Streambed Alteration Agreement – California Department of Fish and Wildlife.
6. Certificate of Yolo Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Authorization – Yolo Habitat Conservancy.

AREAS OF POTENTIAL IMPACTS

The EIR analysis will focus on such resource areas where a potential for impacts may occur as a result of the proposed project, as identified by Appendix G of the CEQA Guidelines. The environmental analysis for the proposed project is anticipated to focus on the following areas: Aesthetics; Agriculture Resources; Air Quality, Greenhouse Gas (GHG) Emissions, and Energy; Biological Resources; Cultural and Tribal Cultural Resources; Geology and Soils; Hazards and Hazardous Materials; Hydrology and Water Quality; Land Use and Planning; Noise; Population and Housing; Public Services and Recreation; Transportation; Utilities and Service Systems; and Wildfire.

Each environmental technical chapter will include the following: an introduction; existing environmental setting; regulatory context; standards of significance; method of analysis; identification of environmental impacts; development of mitigation measures and monitoring strategies to address potentially significant impacts; level of significance after mitigation; and a discussion of potential cumulative impacts and mitigation measures to address potentially significant impacts. The following paragraphs provide a general discussion of the anticipated topics that will be included in the technical chapters of the EIR.

Aesthetics

The Aesthetics chapter of the EIR will summarize the existing regional and site-specific aesthetics and visual setting. Pursuant to Appendix G of the CEQA Guidelines, due to the urban nature of the area, it is anticipated that the focus of the impact analysis will not be on whether the proposed project would substantially degrade the existing visual character or quality of the site and its surroundings, but whether the proposed project could conflict with regulations governing scenic quality. Such analysis will be based on the applicable General Plan policies and City ordinances, and the proposed project's consistency with the standards set forth therein. In addition, the chapter will evaluate potential impacts related to introducing new sources of light and glare.

Agriculture Resources

The Agriculture Resources chapter of the EIR will provide information regarding the existing agricultural setting of the project site. The analysis will include a review of the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program, as well as additional soil characteristics, soil resource quality, and surrounding agricultural lands. This information will become the basis for a determination of whether the project is likely to result in significant impacts with respect to conversion of agricultural land to the proposed uses. Mitigation measures will be identified consistent with the City's Municipal Code. In addition, the chapter will address the project's consistency with LAFCo agricultural policies and standards, and the City's Code requirements for agricultural buffers.

Air Quality, GHG Emissions, and Energy

The Air Quality, GHG Emissions, and Energy chapter of the EIR will include an evaluation of the potential air pollutants that would be generated by the proposed project. The air quality analysis will be performed using the CalEEMod software package and following the Yolo-Solano Air Quality Management District's (YSAQMD) guidelines. A quantitative assessment of short-term (i.e., construction) and long-term (i.e., operational) increases of criteria air pollutant emissions of primary concern (i.e., reactive organic gases, oxides of nitrogen, and particulate matter) will be included. In addition, an evaluation of the proposed project's potential to emit toxic air contaminants (TACs) will be included, using the California Air Resources Board (CARB) "Air Quality and Land Use Handbook: A Community Health Perspective."

The significance of air quality impacts will be determined in comparison to City of Davis and YSAQMD-recommended significance thresholds. Mitigation measures will be incorporated, if necessary, to reduce any significant air quality impacts, and anticipated reductions in emissions associated with proposed mitigation measures will be quantified.

Because YSAQMD has not yet adopted quantitative thresholds of significance for GHG emissions, the City's Climate Action and Adaptation Plan (CAAP) will be used to determine the significance of GHG impacts that may be associated with the proposed project.

Finally, the EIR will analyze whether the proposed project could result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation. This discussion will also evaluate whether the proposed project would conflict with or obstruct a state or local plan for renewable energy, as well as the project's consistency with the City of Davis CAAP.

Biological Resources

The Biological Resources chapter of the EIR will rely on site-specific biological reports and the Yolo HCP/NCCP. In general, the chapter will include an evaluation of the proposed project's potential effects to plant communities, wildlife, and wetlands, including adverse effects on rare, endangered, candidate, sensitive, and other special-status species, including Covered Species protected under the Yolo HCP/NCCP. Significant impacts will occur if construction of the proposed project results in the disturbance of sensitive habitats and/or direct impacts to special-status species. Based on the analysis, mitigation measures will be developed to reduce any project impacts to a less-than-significant level.

Cultural and Tribal Cultural Resources

The Cultural and Tribal Cultural Resources chapter of the EIR will summarize the setting and briefly describe the potential effects to any on-site significant historical, archaeological, and tribal cultural resources due to development of the proposed project. The analysis will be based on a site-specific Cultural Resources Study and any input from Native American tribes as a result of Assembly Bill 52 tribal consultation.

Geology and Soils

The Geology and Soils chapter of the EIR will summarize the existing setting and analyze whether the proposed project would directly or indirectly cause substantial adverse effects associated with soil erosion, earthquakes, liquefaction, and expansive/unstable soils. In addition, the chapter will identify any paleontological resources or unique geological features within the project site. The chapter will rely on a site-specific Geotechnical Report and a search of the University of California, Berkeley Museum of Paleontology records of the project site.

Hazards and Hazardous Materials

The Hazards and Hazardous Materials chapter will summarize the setting and describe any potential for existing or possible hazardous materials within the project area, including, but not necessarily limited to, any lead or asbestos associated with the existing on-site structures, overhead/underground power lines, soil contamination associated with persistent organochlorine pesticides, pesticides/termiticides around building foundations, and/or other former on-site or adjacent hazardous uses. The chapter will be based on site-specific Environmental Site Assessments (ESAs).

Hydrology and Water Quality

The Hydrology and Water Quality chapter will summarize setting information and identify potential project impacts on storm water drainage, flooding, groundwater, and water quality. A project-specific Drainage Report will determine the sufficiency of the proposed drainage system to accommodate additional peak flows generated on-site, in order to prevent off-site flooding, as well as determining whether the project would exceed the volumetric capacity of the downstream system. The Hydrology and Water Quality chapter will also include a discussion of the potential for the proposed project to adversely affect surface water quality, and identify any improvements designed in accordance with State and local standards to minimize impacts to water quality.

Land Use and Planning

The Land Use and Planning chapter will evaluate the consistency of the proposed project with City of Davis General Plan policies, zoning regulations, and LAFCo policies adopted for the purpose of avoiding or mitigating an environmental impact, pursuant to Appendix G of CEQA Guidelines.

Noise

The Noise chapter of the EIR will be based on a project-specific Noise Assessment. The Noise Assessment will include an evaluation of the existing noise environment, prediction of project-generated noise levels, and development of noise control mitigation measures, as appropriate. More specifically, operational noise sources, such as project traffic noise, commercial uses noise, park activities, and the proposed fire station, will be evaluated, as well as noise and vibration impacts associated with construction of the project.

Population and Housing

The Population and Housing chapter will discuss if the proposed project would directly or indirectly induce substantial unplanned population growth or if the project would result in the displacement of substantial numbers of existing people or housing.

Public Services and Recreation

The Public Services and Recreation chapter of the EIR will summarize setting information and identify potential new demand for public services, including fire protection, police, schools, parks, and recreation. A significant impact would occur if the proposed project would result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain the acceptable service ratios, response times, and other performance objectives of the City's public services.

Transportation

The Transportation chapter of the EIR will be based on a project-specific Traffic Impact Study (TIS). The TIS will describe the project's transportation impacts pursuant to CEQA and will inform the analysis within the Transportation chapter. The TIS will evaluate potential project transportation impacts under Existing Plus Project and Cumulative Plus Project conditions by estimating the average weekday vehicle miles traveled (VMT) generated by the project under such conditions. The study will consider the transportation effects of the full buildout of the proposed project, including impacts associated with VMT, transit services and facilities, bicycle facilities, pedestrian facilities, construction activities, emergency access, and roadway hazards.

Utilities and Service Systems

The Utilities and Service Systems chapter will evaluate the project's increase in water supply demand and wastewater generation, and whether the existing water and sewer infrastructure systems will be able to accommodate the demands from the project, or whether upgrades to the systems would be required. Pursuant to Sections 10910 to 10915 of the California Water Code, a Water Supply Assessment will inform the water supply analysis to evaluate whether the City of Davis has sufficient water supply for the proposed project, existing customers, and future anticipated development during normal, single dry, and multiple dry years.

The Utilities and Service Systems chapter will also estimate the amount of solid waste generated by the project and the receiving landfill's capacity to accommodate the increase in solid waste. Dry utility systems will also be considered in this chapter.

Wildfire

The Wildfire chapter will address the questions in Section XX, Wildfire, of Appendix G of the CEQA guidelines. The Wildfire chapter will identify any fire safety hazards and will coordinate with City staff and fire service providers to determine whether mitigation measures might be necessary to address fire safety concerns associated with the development of the proposed project.

Effects Not Found to be Significant

As previously mentioned, some CEQA topics may be addressed at a lesser level than the analysis in each EIR chapter. The Effects Not Found to be Significant chapter will include abbreviated discussions of

impacts determined not to be significant, and therefore, warranting less detailed analysis, some of which are preliminarily anticipated to be related to mineral and forestry resources.

Statutorily Required Sections

The Statutorily Required Sections chapter of the EIR will summarize significant and unavoidable, significant irreversible, and growth-inducing impacts, to the extent that such impacts are identified in the EIR analysis. The chapter will also summarize the cumulative impact analyses, which will be provided in each technical chapter of the EIR. The cumulative impact analysis would also address other proposed and approved projects within the vicinity, including, but not limited to, the Cannery Project, the Shriner's Property Project, and the Palomino Place Project.

Alternatives Analysis

The EIR will include an alternatives analysis in compliance with CEQA Guidelines Section 15126.6. The Alternatives Analysis chapter will evaluate up to five alternatives, including a No Project Alternative, as required by CEQA. Alternatives will be selected when more information related to project impacts is available in order for the alternatives to be designed to reduce significant project impacts. Alternatives shall be developed in consultation with the City staff during preparation of the EIR to respond to identified significant impacts.

It is not anticipated that the alternatives will be analyzed at an equal level to the proposed project. The Alternatives Analysis chapter will describe the project alternatives and identify the environmentally superior alternative. The alternatives will be analyzed at a level of detail less than that of the proposed project which is permissible under CEQA; however, the analyses will include sufficient detail to allow a meaningful comparison of the impacts. The Alternatives Analysis chapter will include a qualitative-level analysis of all impacts for the alternatives, and a section for alternatives considered but dismissed. A matrix comparing the impacts of the proposed project to the alternatives will also be included.

FIGURE 1
REGIONAL VICINITY



*Figure not OCR compatible

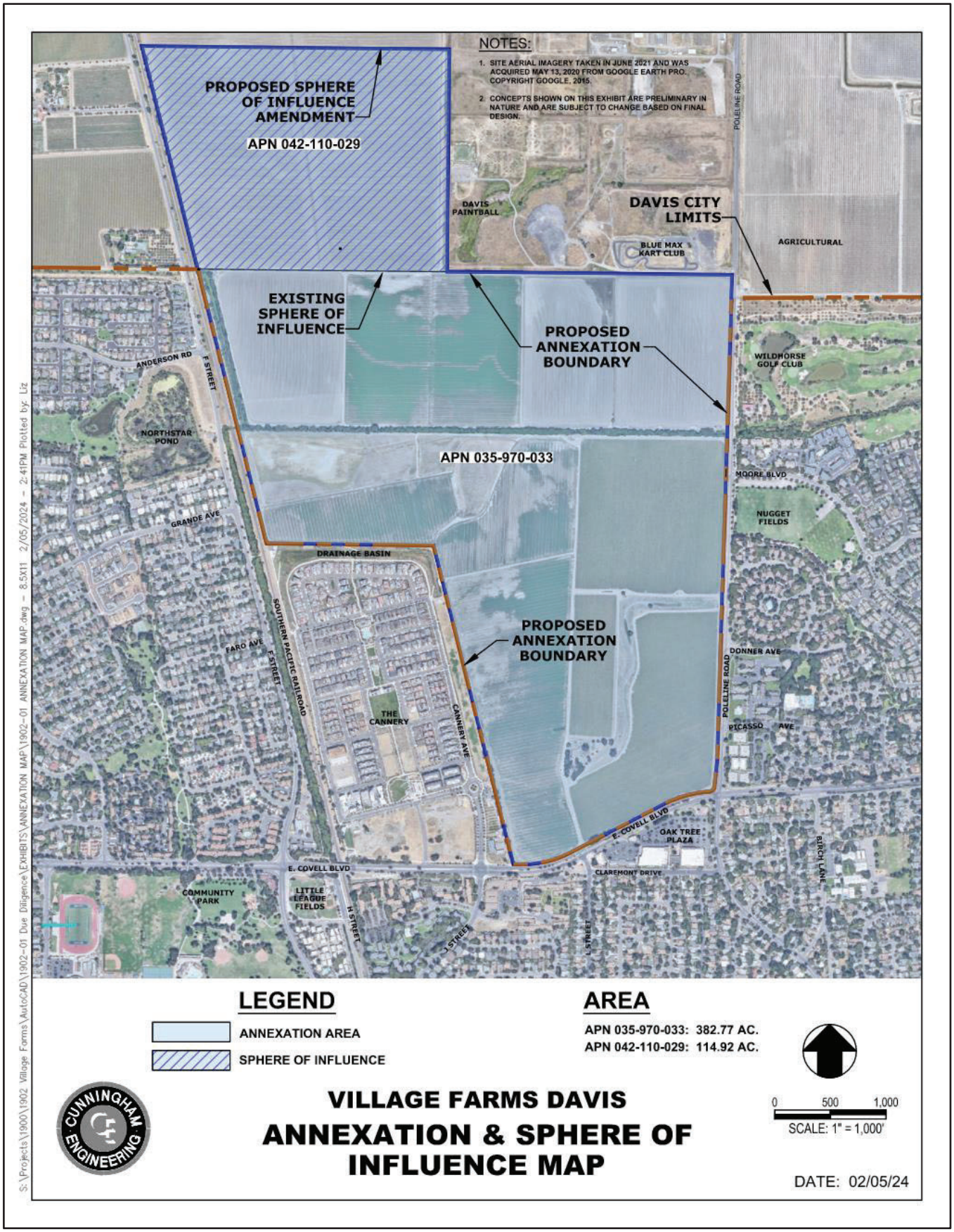
FIGURE 2
PROJECT SITE BOUNDARIES



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

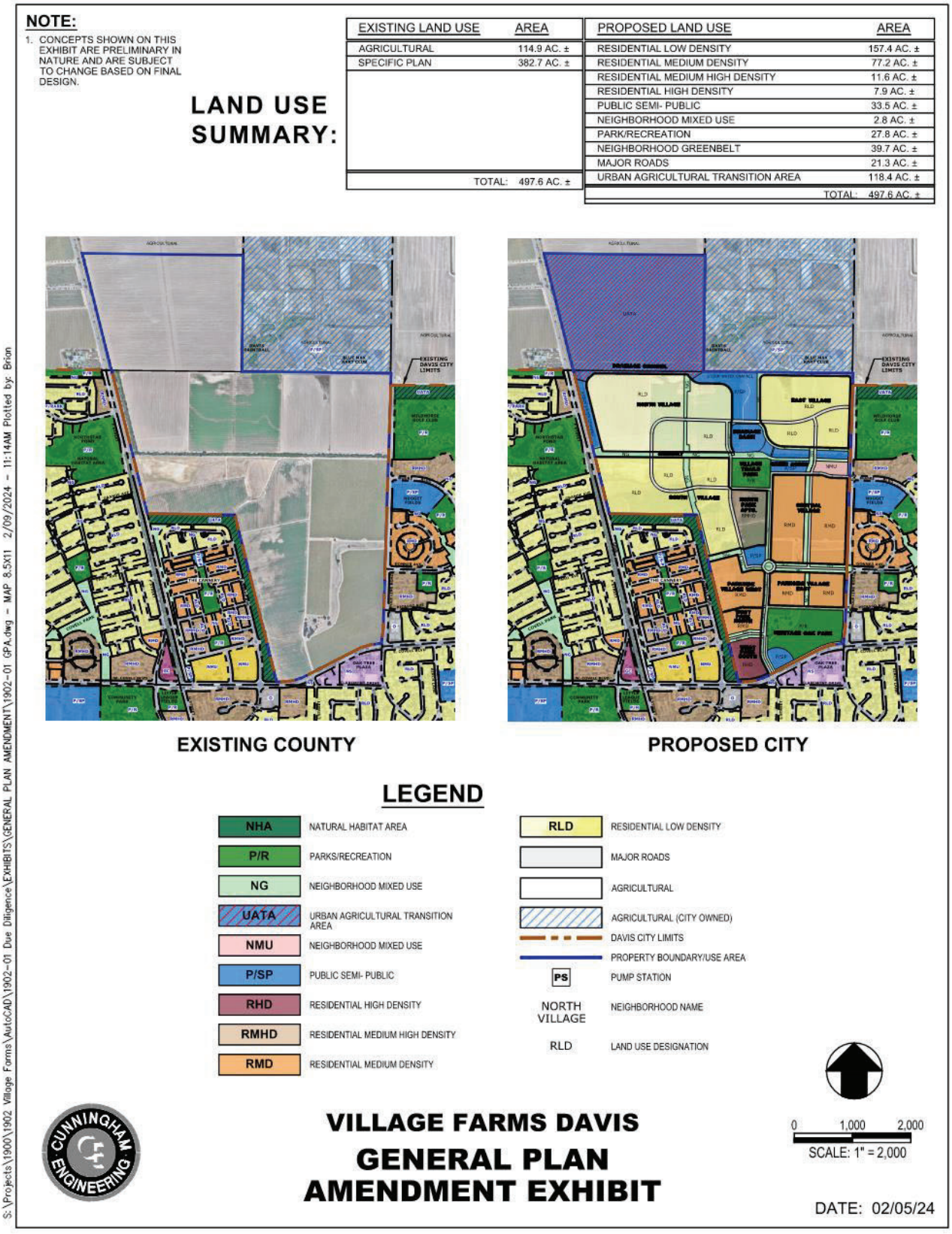
FIGURE 3
SPHERE OF INFLUENCE AMENDMENT AND ANNEXATION



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

FIGURE 4
GENERAL PLAN AMENDMENT



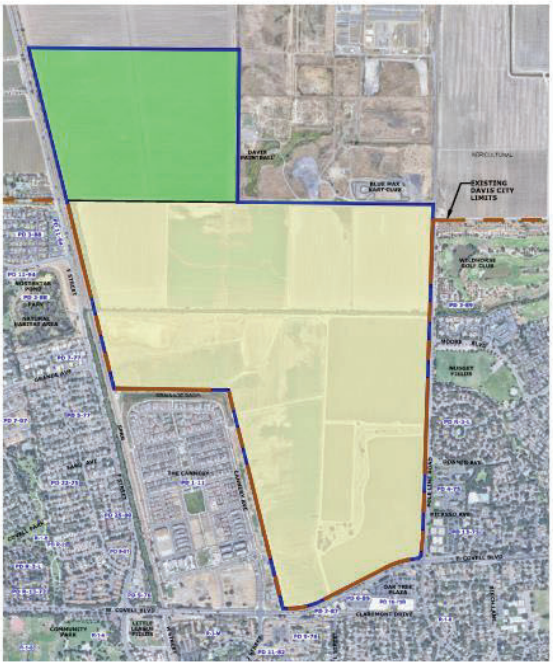
PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

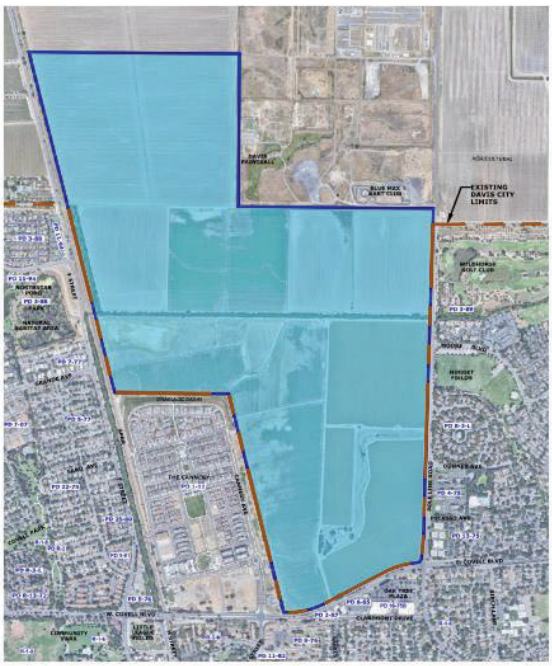
*Figure not OCR compatible

FIGURE 5
PRE-ZONING

NOTES:

1. SITE AERIAL IMAGERY TAKEN IN JUNE 2021 AND WAS ACQUIRED MAY 13, 2020 FROM GOOGLE EARTH PRO. COPYRIGHT GOOGLE, 2015.
2. CONCEPTS SHOWN ON THIS EXHIBIT ARE PRELIMINARY IN NATURE AND ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN.





EXISTING PREZONING DESIGNATION

- SPECIFIC PLAN (SP)
- AGRICULTURAL

PROPOSED PREZONING DESIGNATION

- VILLAGE FARMS DAVIS PLANNED DEVELOPMENT (PD)

PREZONING SUMMARY

EXISTING PREZONING	AREA	PROPOSED PREZONING	AREA
NEW PLANNED DEVELOPMENT	0.0 AC. ±	NEW PLANNED DEVELOPMENT	497.6 AC. ±
SPECIFIC PLAN	382.7 AC. ±	SPECIFIC PLAN	0.0 AC. ±
AGRICULTURAL	114.9 AC. ±	AGRICULTURAL	0.0 AC. ±

CUNNINGHAM ENGINEERING

VILLAGE FARMS DAVIS

PREZONE MAP

0 1,000 2,000
SCALE: 1" = 2,000

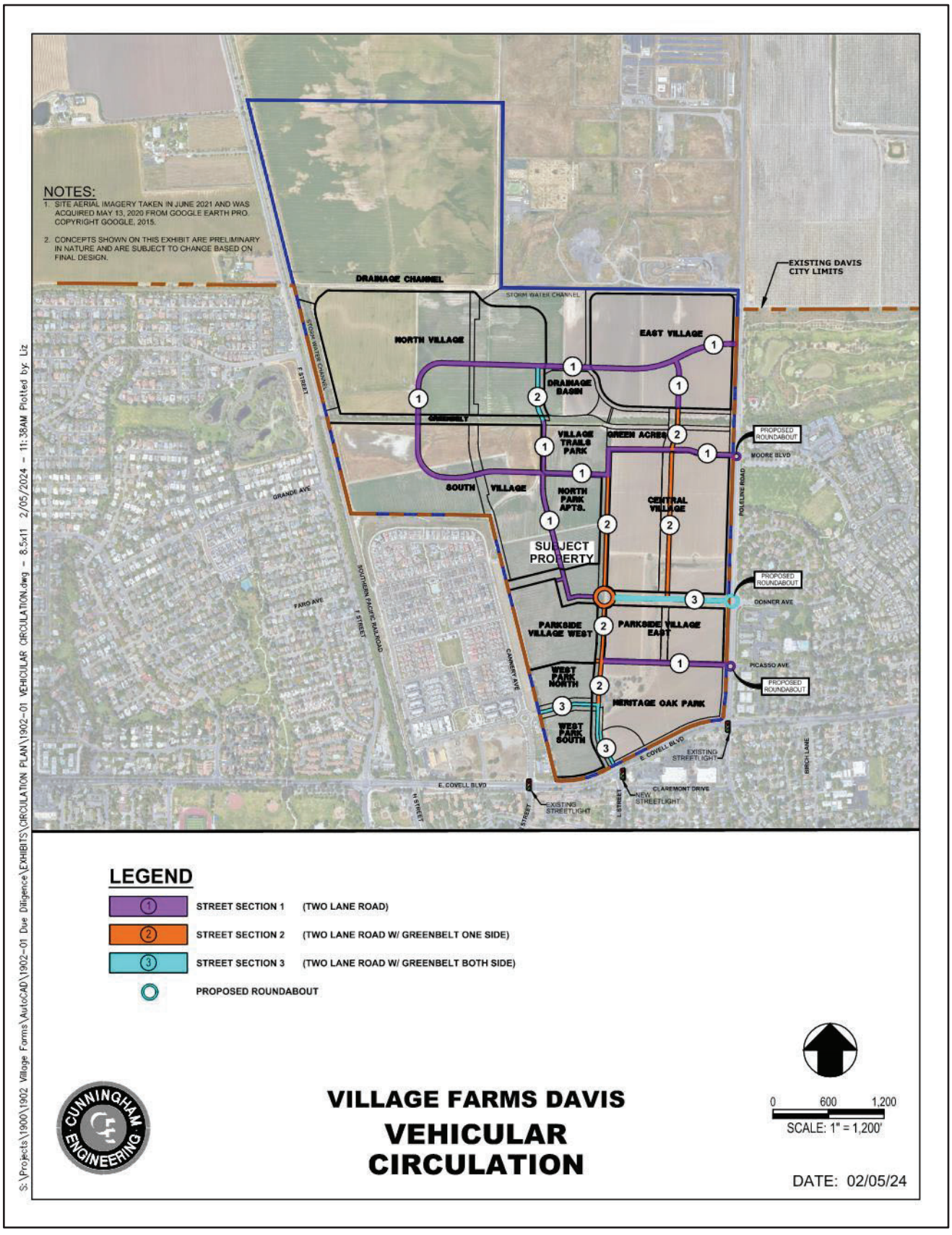
DATE: 02/05/24

S:\Projects\1900\1902 Village Farms\AutoCAD\1902-01 Due Diligence\EXHIBITS\PREZONE\1902-01 PREZONE MAP.dwg - 8.5x11 2/05/2024 - 3:12PM Plotted by: Liz

PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

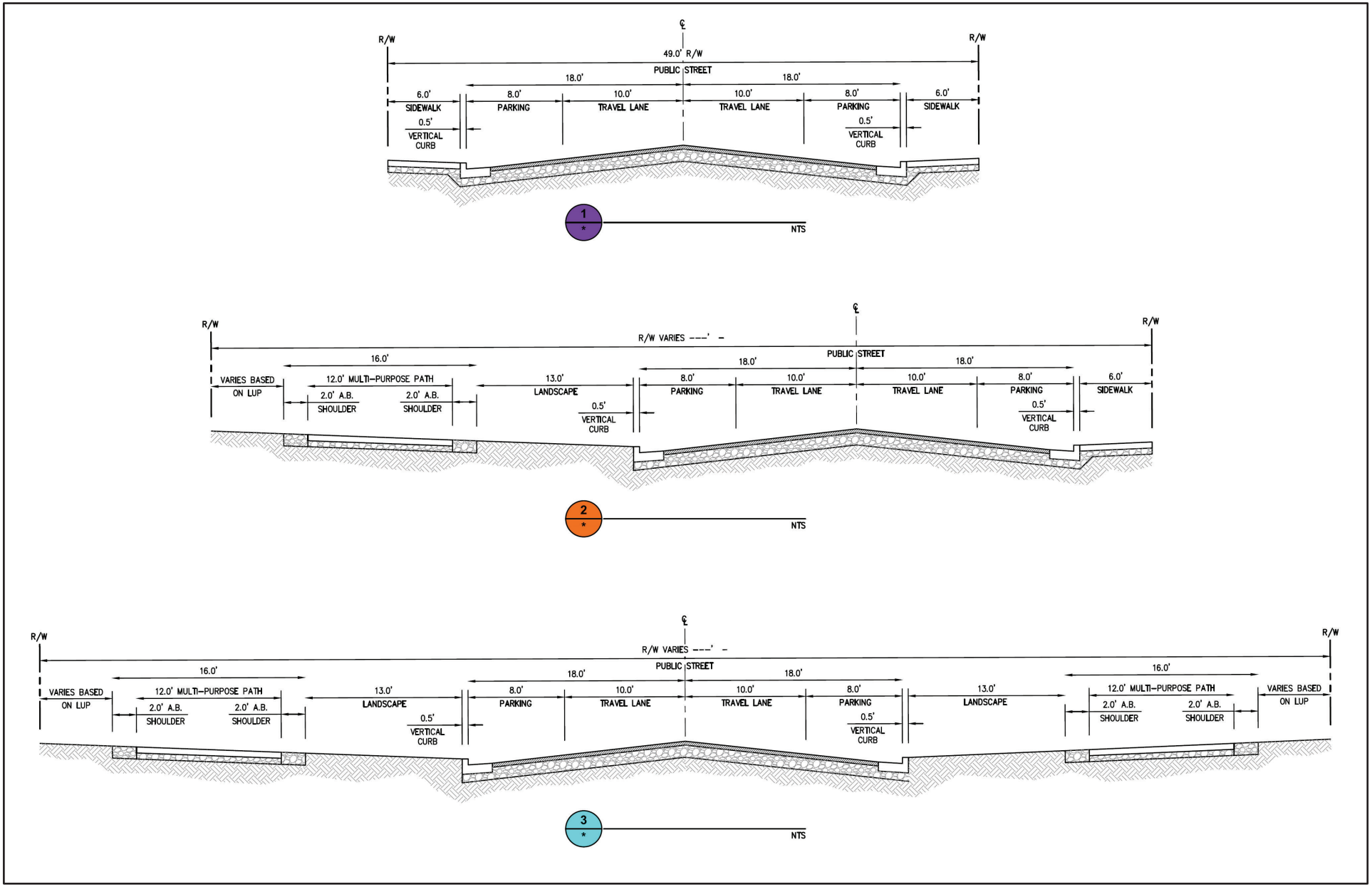
FIGURE 6
VEHICULAR CIRCULATION PLAN



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

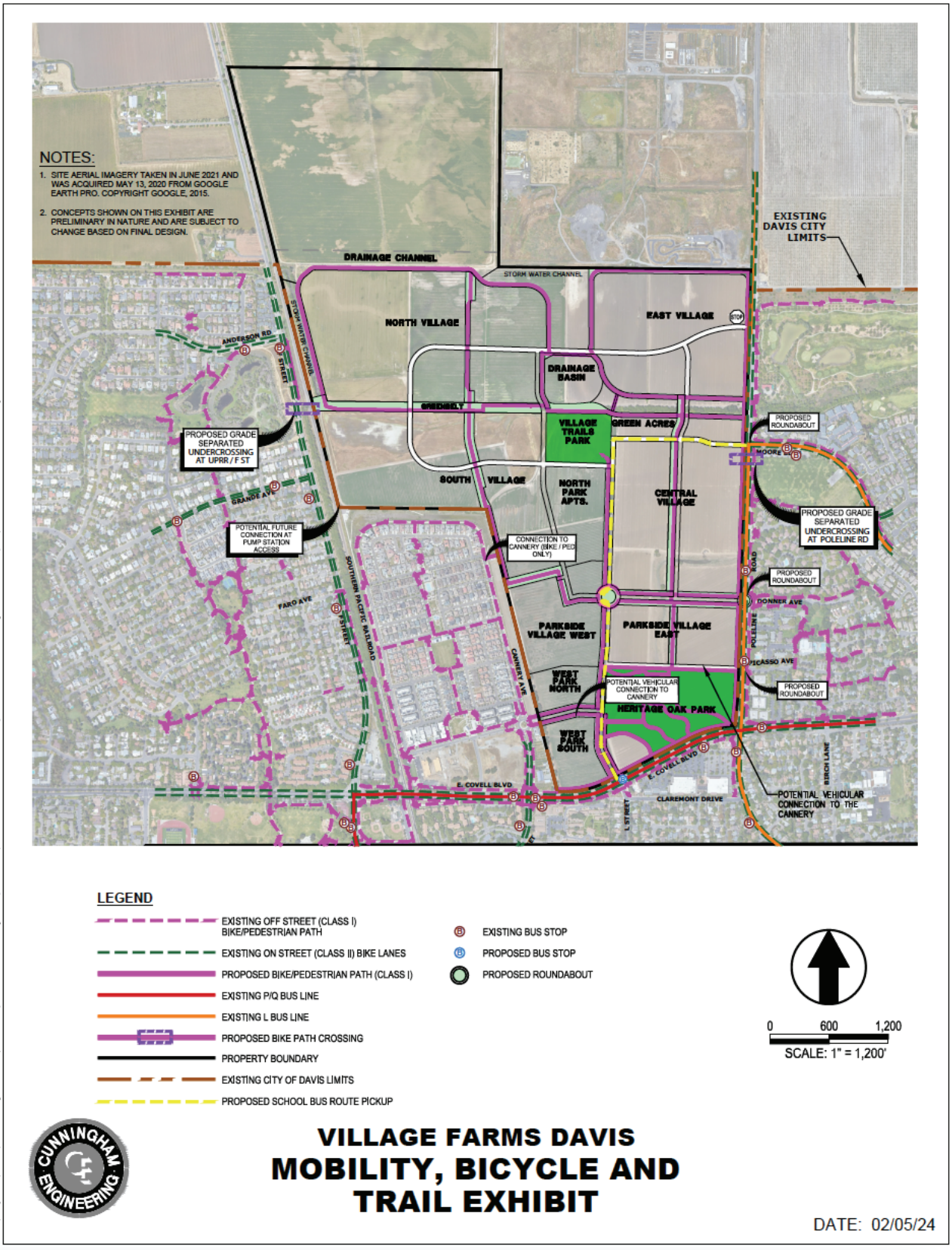
FIGURE 7
VEHICULAR CIRCULATION CROSS-SECTIONS



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

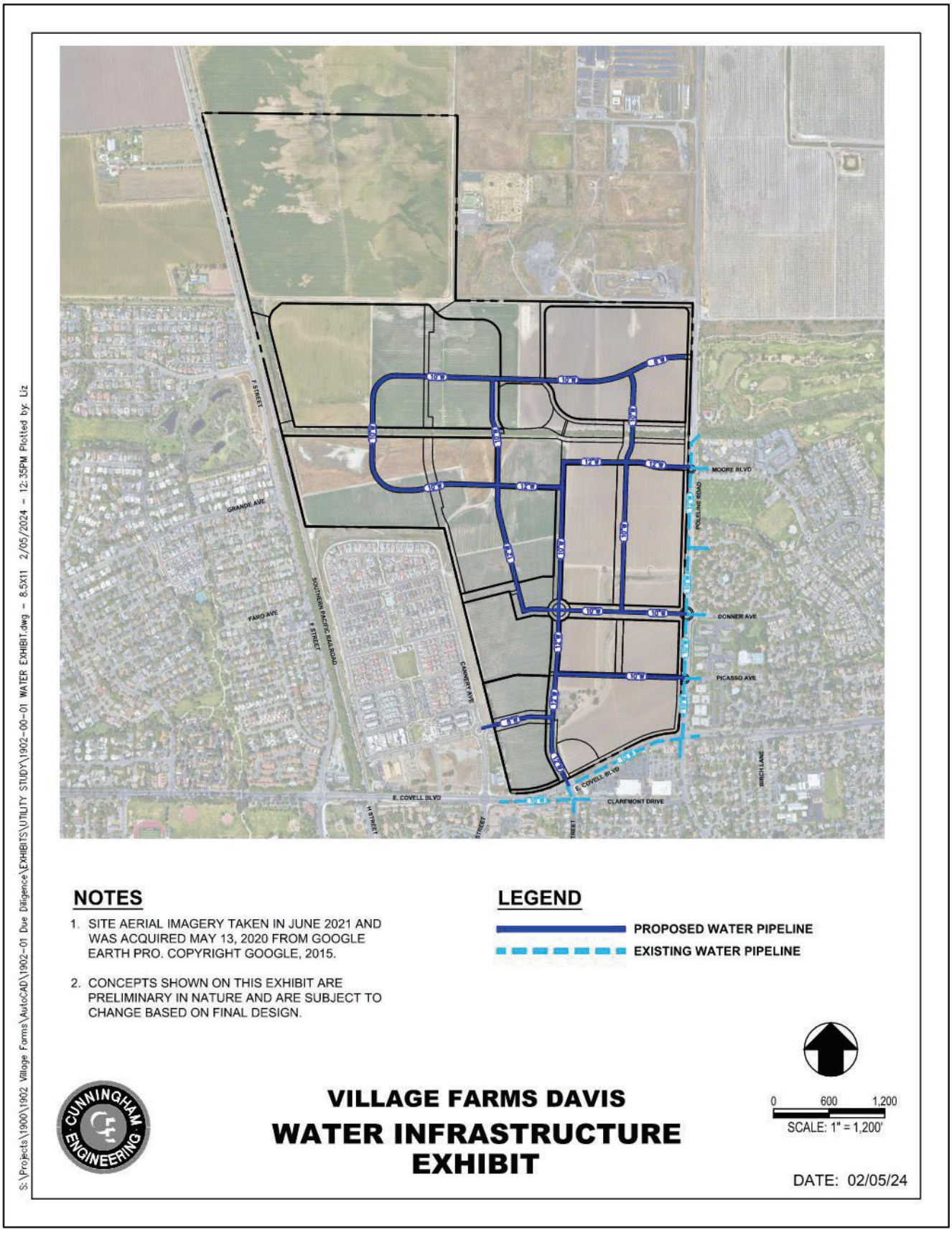
FIGURE 8
MOBILITY, BICYCLE, AND TRAIL CIRCULATION EXHIBIT



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

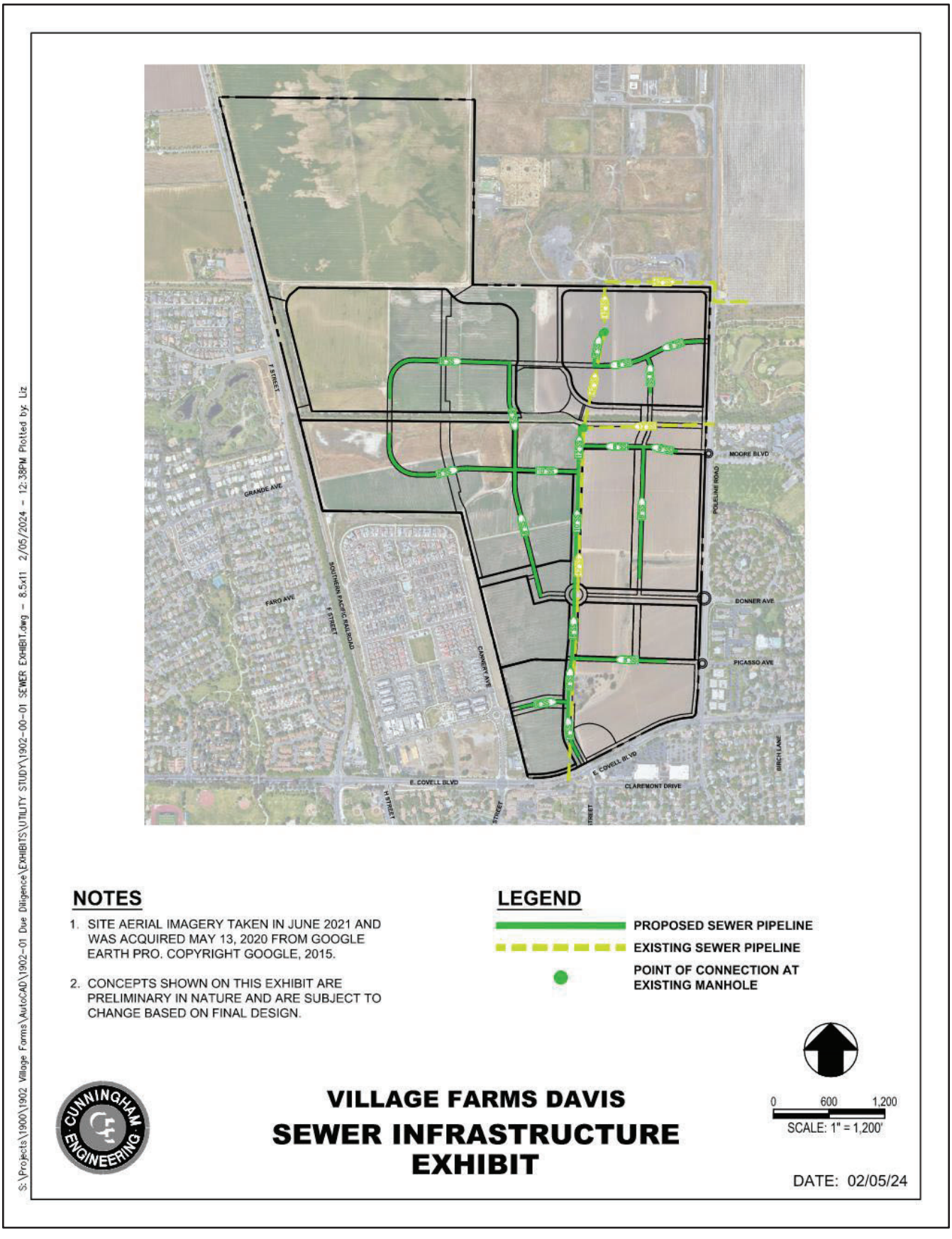
FIGURE 9
WATER INFRASTRUCTURE EXHIBIT



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

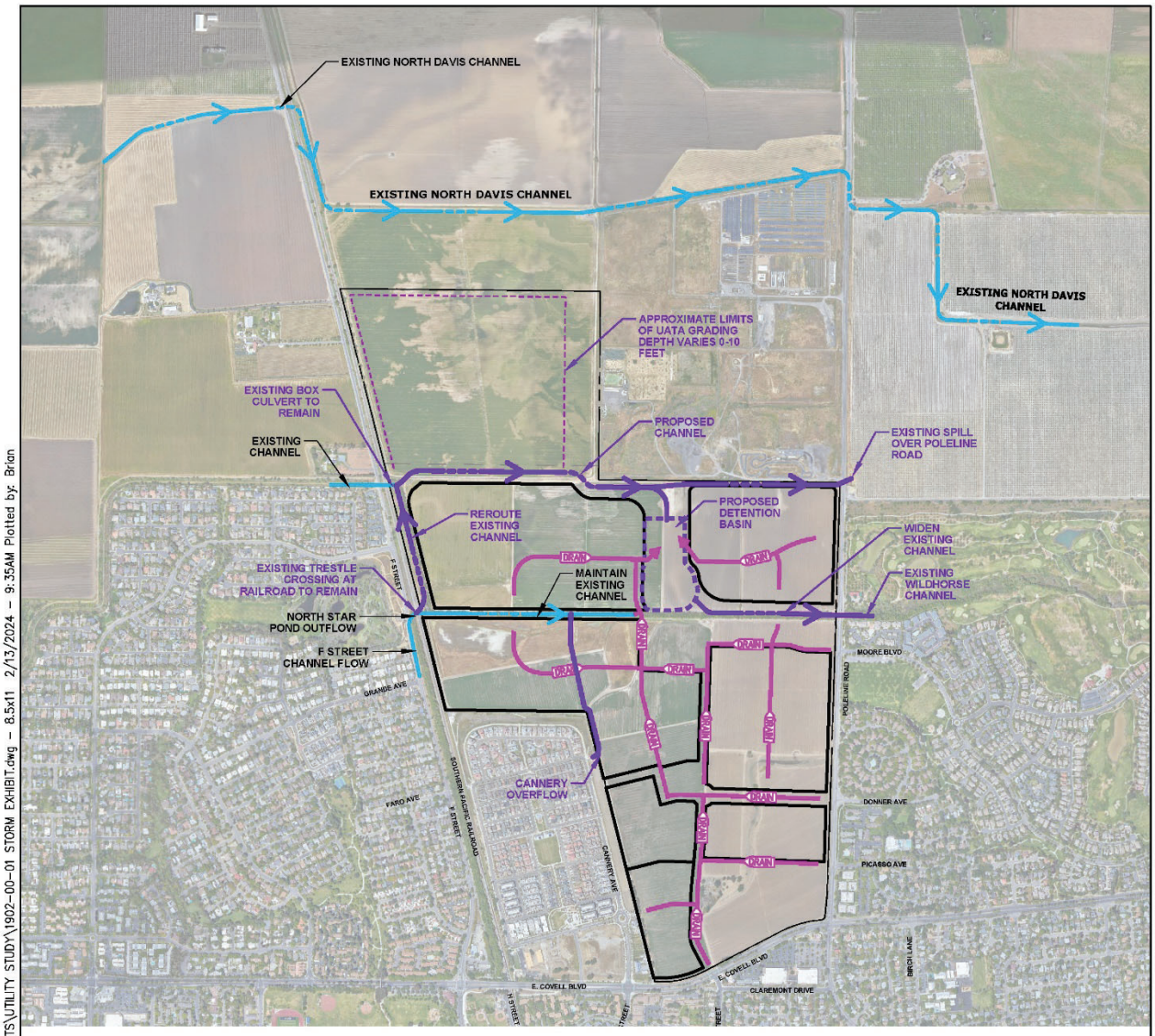
FIGURE 10
Sewer Infrastructure Exhibit



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

FIGURE 11
DRAINAGE INFRASTRUCTURE EXHIBIT



NOTES

1. SITE AERIAL IMAGERY TAKEN IN JUNE 2021 AND WAS ACQUIRED MAY 13, 2020 FROM GOOGLE EARTH PRO. COPYRIGHT GOOGLE, 2015.
2. CONCEPTS SHOWN ON THIS EXHIBIT ARE PRELIMINARY IN NATURE AND ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN.

LEGEND

PROPOSED STORM DRAIN PIPELINE

OPEN CHANNEL CONVEYANCE

CUNNINGHAM ENGINEERING

VILLAGE FARMS DAVIS

DRAINAGE INFRASTRUCTURE EXHIBIT

0 750 1,500

SCALE: 1" = 1,500'

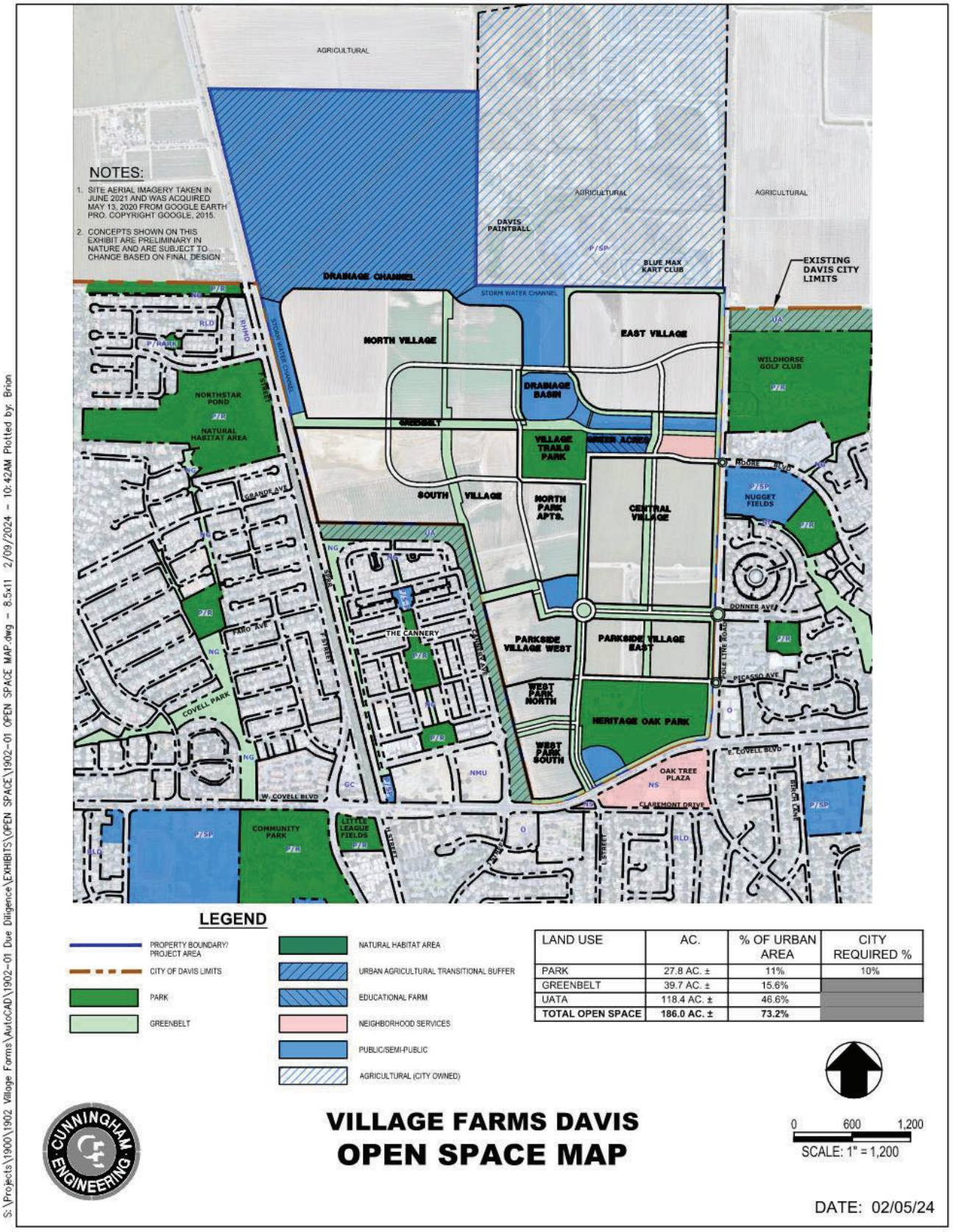
DATE: 02/05/24

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PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

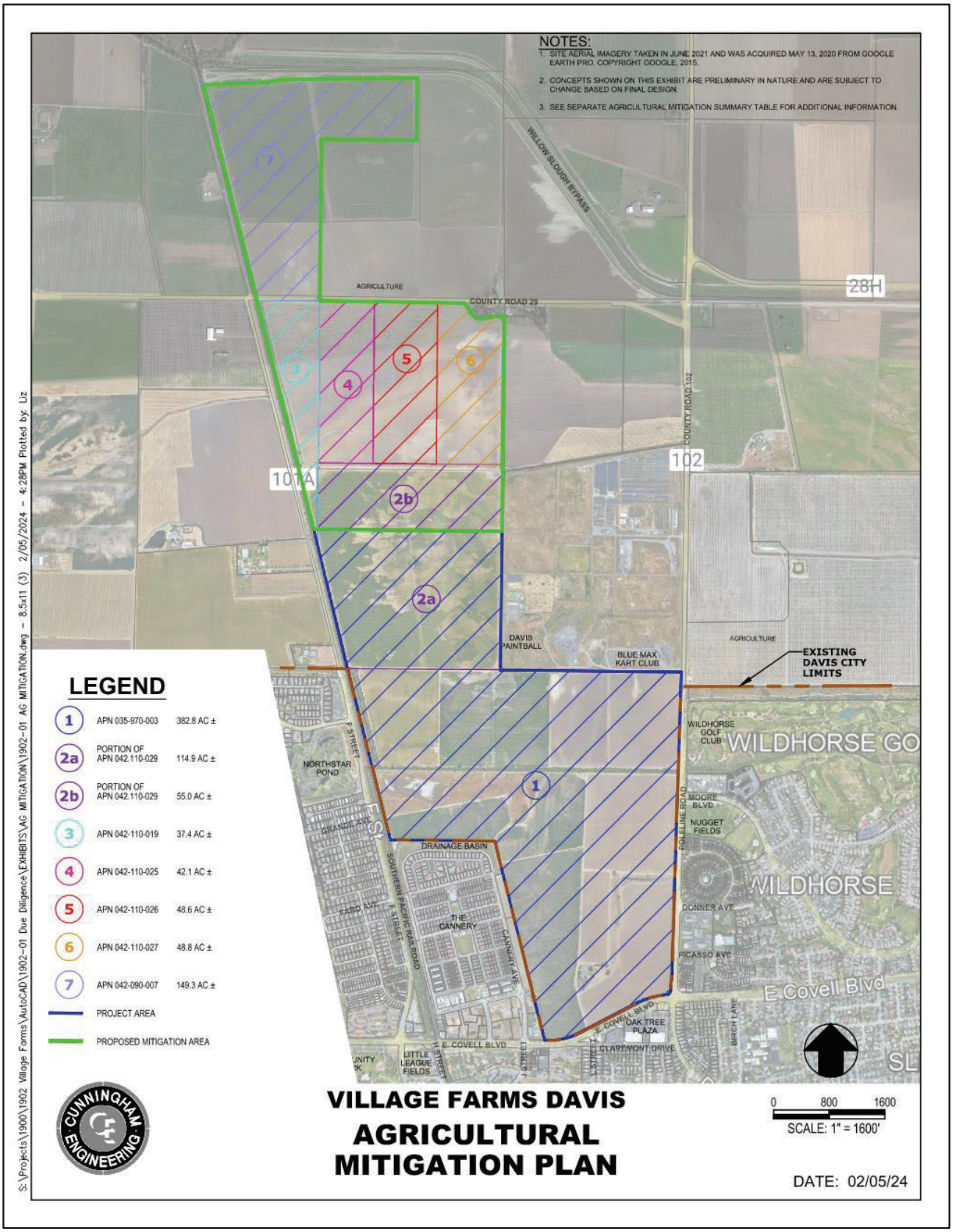
FIGURE 12
OPEN SPACE MAP



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

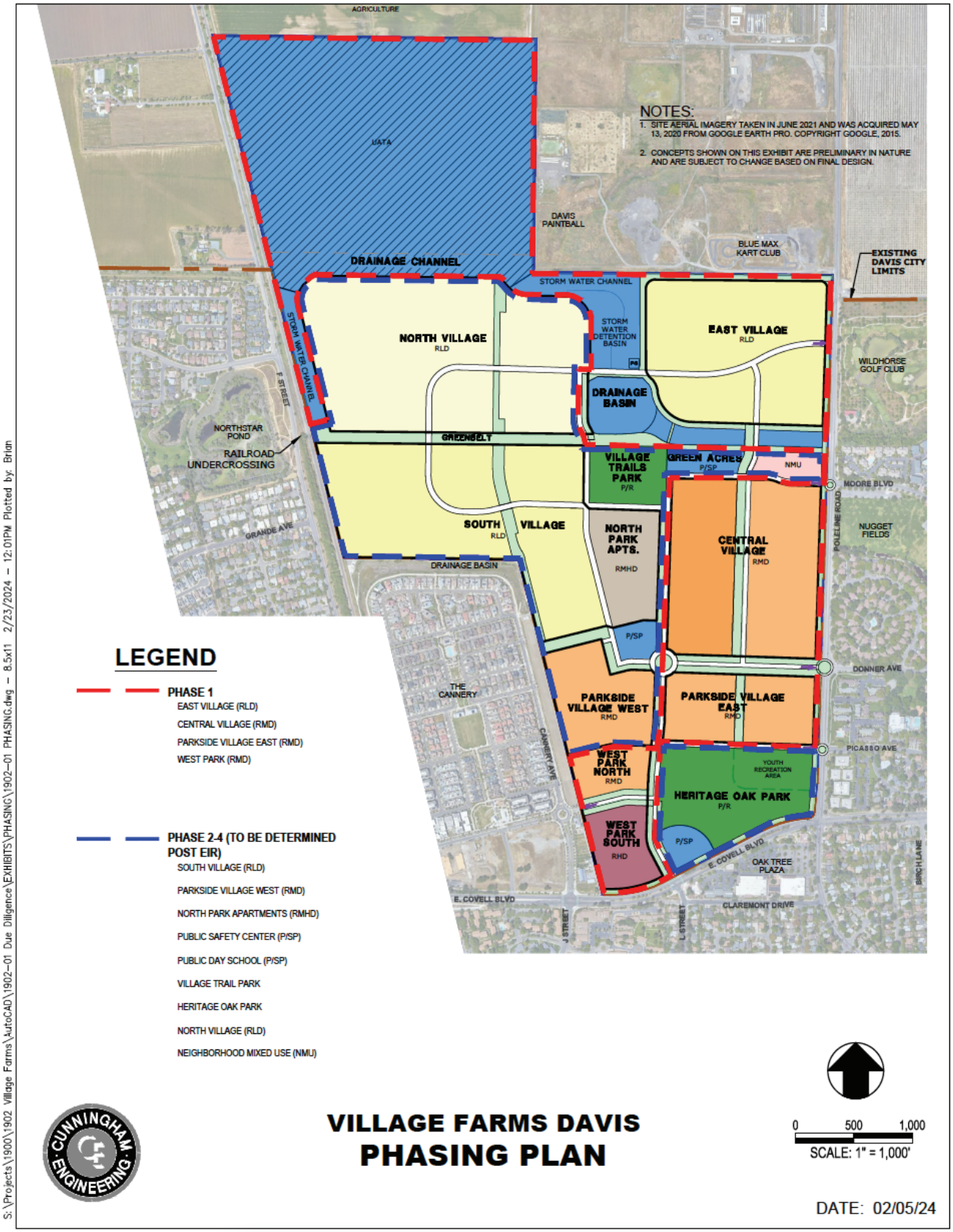
FIGURE 13
AGRICULTURAL MITIGATION PLAN



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

FIGURE 14
PHASING PLAN



PROPOSED: FINAL DESIGN SUBJECT TO EIR FINDINGS.

*Figure not OCR compatible

Appendix B: Palomino Phasing and Demands

Melanie Holton

From: Stan Gryczko <SGryczko@cityofdavis.org>
Sent: Thursday, March 21, 2024 1:02 PM
To: Melanie Holton; Adrienne Heinig
Cc: Sherry Kimura; Nicholas Roby; Timothy Lee
Subject: RE: Village Farms Driven City Improvements

And once again, more info coming in for Palomino. Please see below and make sure it matches in the analysis.

We've revised the project description for the EIR analysis to include up to 45 apt. units, which could increase the total number to a maximum of 175 units and provided in the table below. Can you make sure that is captured in the utility studies?

Table 1
Proposed Residential Units

Unit Type	Number of Units	Percentage of Total Units	Anticipated Unit Size (Square Feet) +/- 10%
Cottages	19	12%	850 – 1,000 +/-
Half-Plex Townhomes	29	18%	1,250 – 1,450 +/-
Single-Family Residences – Medium	31	19%	1,600 – 2,000 +/-
Single-Family Residences – Large	51	31%	1,900 – 2,500 +/-
Multi-Family Apartments	33*	20%**	Studio, 1 BR, and 2 BR
Total	**163*** **	**100%**	**850 – 2500 +/-**

* The number of multi-family units could increase to 45 at the Council's discretion and, for purposes of this EIR, the project will be analyzed as such.
** If there are 45 apartments, then multi-family would represent 26% of total units.
*** 45 apartments would increase the total project unit count to 175.

Stan

From: Stan Gryczko
Sent: Thursday, March 21, 2024 8:00 AM
To: 'Melanie Holton' <MHolton@BrwnCald.com>; Adrienne Heinig <AHeinig@cityofdavis.org>
Cc: Sherry Kimura <SKimura@cityofdavis.org>; Nicholas Roby <NRoby@BrwnCald.com>; Timothy Lee <TLee@BrwnCald.com>
Subject: RE: Village Farms Driven City Improvements



COTTAGE LOTS AREAS:

LOT 87	= 1,837 SF
LOT 88 – 91	= 1,575 SF
LOT 94 – 99	= 1,575 SF
LOT 102 – 105	= 1,575 SF

LEGEND:

- FIRST MOVE-UP [AREA = 3.53 A.C.]
- SECOND MOVE-UP [AREA = 7.16 A.C.]
- HALF-PLEX TOWNHOMES [AREA = 2.53 A.C.]
- COTTAGES [AREA = 0.97 A.C.]
- APARTMENTS [AREA = 0.72 A.C.]
- UPDATED RANCH [AREA = 0.48 A.C.]
- PUBLIC/SEMI-PUBLIC [AREA = 1.40 A.C.]
- OPEN SPACE [AREA = 2.76 A.C.]
- OPEN SPACE/TRAIL CONNECTION [AREA = 0..46 A.C.]
- STREET [AREA = 5.33 A.C.]
- COVELL BLVD R.O.W. DEDICATION [AREA = 0.41 A.C.]

[TOTAL AREA = 25.75 A.C.]

DESIGNED ZH
DRAWN ZH
CHECKED BF
JOB No: 1807.00.06

PALOMINO PLACE
OVERALL LOT SIZES EXHIBIT

DAVIS CALIFORNIA

CUNNINGHAM ENGINEERING
CECWEST.COM
Project Planning ■ Civil Engineering ■ Landscape Architecture
■ Sacramento Office
2120 20th Street, Suite Three
Sacramento, CA 95818
(916) 455-2026
■ Davis Office
2940 Spafford Street, Suite 200
Davis, CA 95618
(530) 758-2026

DATE: 01/24/24

SHEET 1 OF 1

S:\Projects\1800\1807 Palomino Place\AutoCAD\1807-00-06 ENTITLEMENT PHASE PREPARATION\EXHIBITS\AREA TAKEOFF\1807-00-06 AREA TAKEOFF - DELTA.dwg - OVERALL 1/26/2024 - 11:23AM Plotted by: Brian

*Figure not OCR compatible



PROJECT SUMMARY:

TOTAL AREA:	25.80 ACRES
RESIDENTIAL AREA:	15.20 ACRES
OPEN SPACE:	2.76 ACRES
TRAIL CONNECTION:	0.45 ACRES
PUBLIC AREA:	1.40 ACRES
ROADWAYS:	5.58 ACRES
COVELL R.O.W DEDICATION:	0.41 ACRES

UNIT MIX:

COTTAGES (850 - 1,000 SF) =	19
UPDATE RANCH STYLE RESIDENCE (+/- 2,800 SF) =	1
HALF-PLEX TOWNHOMES (+/- 1,250 TO 1,450 SF) =	29
APARTMENTS (Studio, 1BR & 2BR) =	33
MEDIUM SFD (+/- 1,600 TO 2,000 SF) =	31
LARGE SFD (+/- 1,900 - 2,500 SF) =	51
TOTAL =	164

LOT OWNERSHIP & MAINTENANCE:

HOA	CITY
LOT A	LOT D
LOT B	LOT F
LOT C	LOT G - STORMWATER POND
LOT E	STREETS
LOT H	
LOT I	

DATE: JANUARY 26, 2023

DESIGNED ZH
DRAWN ZH
CHECKED BF
JOB No: 1807.00.06

PALOMINO PLACE
PROPOSED SITE PLAN

DAVIS CALIFORNIA

CUNNINGHAM ENGINEERING
CECWEST.COM
Project Planning ■ Civil Engineering ■ Landscape Architecture
■ Sacramento Office
2120 20th Street, Suite Three
Sacramento, CA 95818
(916) 455-2026
■ Davis Office
2940 Spafford Street, Suite 200
Davis, CA 95618
(530) 758-2026

SCALE 1"=150'
DATE 01/26/2024
SHEET 1 OF 1

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*Figure not OCR compatible

1 WATER

1.1 INTRODUCTION

This water system technical appendix provides information to support the proposed 25-acre Palomino Place Community Centered Housing by Dave Taormino. The proposed site is adjacent to the City of Davis municipal water system and will connect to the City system for potable water supply.

1.2 EXISTING WATER INFRASTRUCTURE

The City of Davis water system is comprised of above ground storage tanks, underground wells and surface water supply from the Sacramento River via the Davis-Woodland Water Supply Project (DWWSP). The DWWSP in addition to existing ground water wells provide water supply for the City of Davis.

The City infrastructure system includes a 12" main on the south side of E Covell Blvd and an 8" main within Caravaggio Dr and Bonnard St intersection. Connections would be made to both mains, creating a closed loop as required by City standards.

1.3 WATER DEMAND

The City of Davis Average Day Unit Water Demand factors are summarized below:

1991 Unit Water Demand Factors		
Type of Use	Unit Water Demands	Unit of Measure
Single Family Residential	612	Gallons per DU-day
Cottages	260	Gallons per DU-day
Retail, Commercial and Industrial	2500	Gallons per Acre-day

Table 1-1: City of Davis Public Works Design Standards - September 1991

However, based on the 2015 SB 610 Water Supply Assessment that was prepared as a part of the recent Davis Innovation Center, Mace Ranch Innovation Center and Nishi Property, water demands are significantly lower than the values in Table 1-1. This is a result of the expected water use in new residential dwelling units being lower due to the use of high efficiency water fixtures that are compliant with current standards.

2015 Unit Water Demand Factors		
Type of Use	Unit Water Demands	Unit of Measure
Single Family Residential	345	Gallons per DU-day
Multiple Family Residential	174	Gallons per DU-day
Commercial/Institutional/Industrial	2,400	Gallons per Acre-day
Landscape	2,712	Gallons per Acre-day

Table 1-2 – 2015 SB 610 Water Supply Assessment

The project is not planning for a non-potable water source for irrigation of public green spaces with initial development however this may be considered in the future. The City of Davis has

long term planning goals to provide the City with non-potable water from the waste water treatment plant for irrigation of public green spaces. With the treatment plant about 3 miles to the northeast of the project, it is feasible to use recycled waste water for irrigation of the site in the future, but would require further study.

1.3.1 Potable Water Demand Summary

The proposed unit demand factors identified above represent the Average Day Demand for the proposed project. The Maximum Day peaking factor is 1.8[1] and the peak hour peaking factor is 1.8 in accordance with the City of Davis Public Works Design Standards. Assuming that the proposed landscaping within the development is served by the City of Davis water system, the potable water demand is summarized in Table 1.3 below.

Land Use Designation	Acres	Units	Average Day Demand (gpd)	Maximum Day Demand (gpd)	Peak Hour Demand (gpd)
Cottages	0.97	19	3,300	5,940	10,692
Half-Plex Townhomes	2.53	29	10,000	18,000	32,400
First Move-Up	3.53	31	10,700	19,260	34,668
Second Move-Up	7.16	51	17,600	31,680	57,024
Apartments	0.72	33	5,700	10,260	18,468
Update Ranch Style Home	0.48	1	300	540	972
Pentathlon Center	1.40	-	4,400	7,920	14,256
Open Space	2.76	-	7,500	13,500	24,300
Trail Connections	0.46	-	1,200	2,160	3,888
Total	**20.01**		**60,700**	**109,260**	**196,668**

Table 1-3 - Potable Water Demand

The proposed Palomino Place Community will increase the maximum daily demand on the City of Davis water system by 0.197 MGD. The City of Davis estimates that the proposed ground water supply will be 14,200 ac-ft/yr (~12.7 MGD) in 2025, increasing to 15,000 ac-ft/yr (~13.4 MGD) by 2030. Based on the historical City of Davis water supply, it is anticipated that the project can be adequately served by the City of Davis water system

1.4 Water Infrastructure

Figure W1 attached identifies the potential water infrastructure layout for the proposed Palomino Place Community. The preliminary water infrastructure onsite is estimated at 8" pipes to serve the development. A future study will need to be conducted to further refine the proposed pipe sizes throughout the development to meet the domestic demands and the fire flow demands. The triggers for the proposed infrastructure will also be defined in this future study to confirm adequate flow can be provided with each phase of the development. The project proposes connection points to the existing system at the intersection of Caravaggio Dr and Bonnard St, and in E Covell Blvd at the proposed entrance off E Covell Blvd.

[1] Based on the 2015 SB 610 Water Supply Assessment

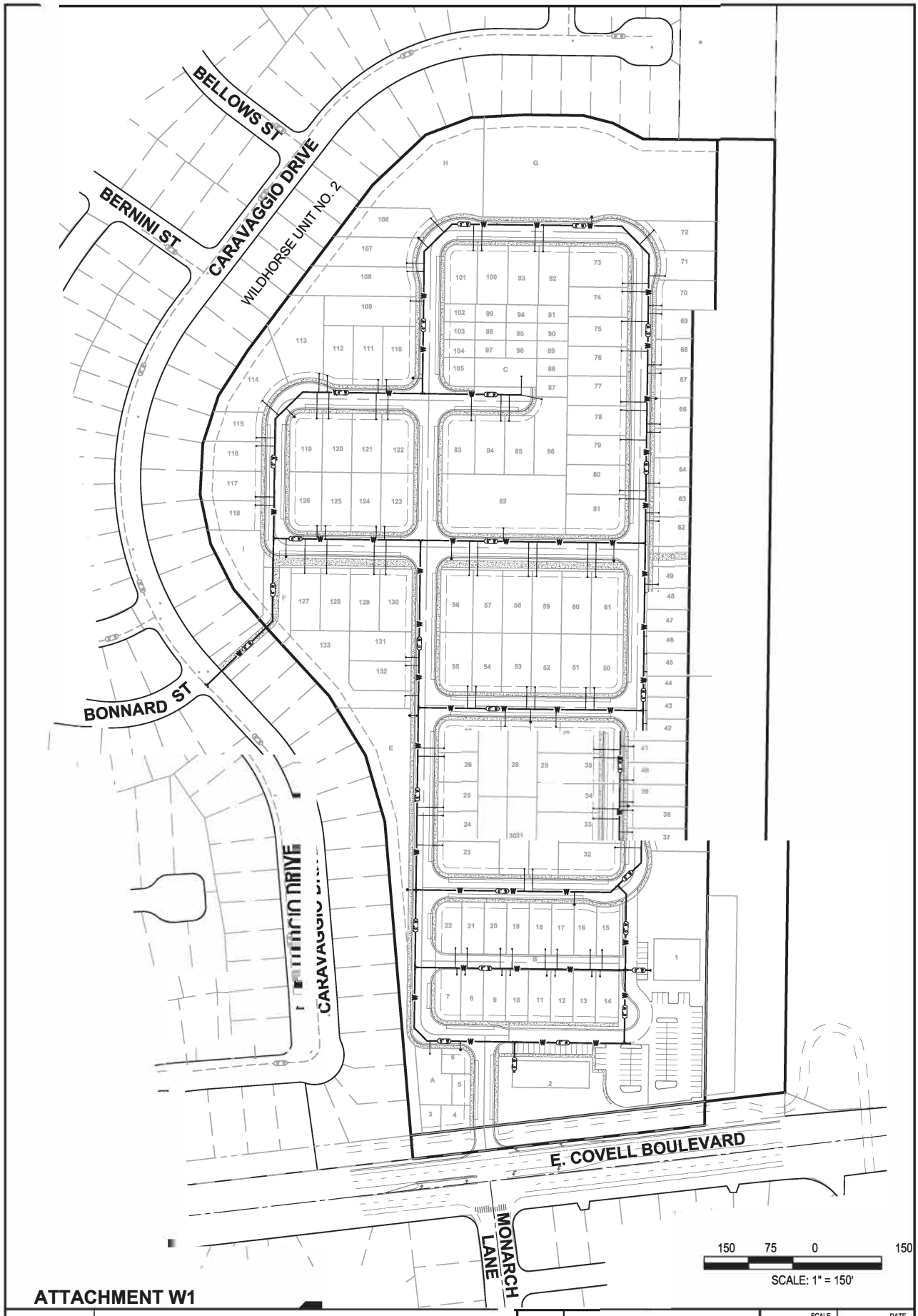
Attachments:

- Figure W1 – Utility Infrastructure – Water
- Table W1 – Potable Water Demand

TABLE W1 Potable Water Demand

Land Use Designation	Land Use	Acres	Building Footprint (sf)	Dwelling Units	Office Unit Demand Factors	Unit Water Demand [1] (gallons per unit/acre per day)	Unit Fire Flow Demand[2] (gpm)	Average Day Demand (gpd)	Maximum Day Peaking Factor	Maximum Day Demand (gpd)	Peak Hour Peaking Factor	Peak Hour Demand (gpd)
Single Family Residential	Cottages	0.97	-	19	-	174	1,000	3,300	1.8	5,940	1.8	10,692
	Half-Plex Townhomes	2.53	-	29	-	345	1,000	10,000	1.8	18,000	1.8	32,400
	First Move-Up	3.53	-	31	-	345	1,000	10,700	1.8	19,260	1.8	34,668
	Second Move-Up	7.16	-	51	-	345	1,000	17,600	1.8	31,680	1.8	57,024
	Apartments	0.72	-	33	-	174	1,000	5,700	1.8	10,260	1.8	18,468
	Update Ranch Style Home	0.48	-	1	-	345	1,000	300	1.8	540	1.8	972
Recreation	Pentathlon Center	1.40	10,200	-	15 gpd/employee	2,400	4,000	4,400	1.8	7,920	1.8	14,256
Open Space/ Landscaping	Open Space	2.76	-	-	-	2,712	-	7,500	1.8	13,500	1.8	24,300
	Trail Connections	0.46	-	-	-	2,712	-	1,200	1.8	2,160	1.8	3,888
Total		20.01		164				60,700		109,260		196,668

(1) Based on 2015 SB 610 Water Supply Assessment, SFR at 345 gpd/unit and MFR at 174 gpd/unit (cottages, ADUs), plus 20% reduction.
(2) Based on City of Davis Design Standards, Section VIII.B.3



ATTACHMENT W1

PALOMINO PLACE
WATER SYSTEM EXHIBIT

DESIGNED ZH
DRAWN ZH
CHECKED BF
JOB No: 1807.00.06 DAVIS CALIFORNIA

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SCALE 1"=150'
DATE 01/24/2024
SHEET 1 OF 1

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*Figure not OCR compatible