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## 5.0 | PUBLIC UTILITIES AND SERVICES

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## 5.1 | OVERVIEW

The goal of the Public Utilities and Services chapter is to identify the necessary public utilities and public services required to serve the Plan Area. The first part of this Chapter addresses the required public utilities of water, recycled water, wastewater, drainage/flood control as well as dry utilities of electric, gas and communications. This Chapter identifies the backbone infrastructure necessary to serve the Plan Area. Utility infrastructure will be constructed to ensure compliance with all applicable service and improvement standards, and state and federal laws and regulations.

The coordinated delivery of public services is essential to ensure a complete community, one that provides public safety, recreational, educational and library services for the residents. The Public Services Element of the General Plan provides information and policy guidance to ensure that services are sufficient to support new development in the Plan Area. Infrastructure extension and financing obligations relating to public utilities services are outlined in the Project EIR and Mitigation Monitoring Plan, development agreements and/or in Implementation Chapter 6 of the Specific Plan. Table 5.1, Utility and Service Providers, lists the entities that will serve the Plan Area.

<b>Table 5.1: Utility and Service Providers</b>			
<b>Utility</b>	<b>Provider</b>	<b>Service</b>	<b>Provider</b>
Water	City of Woodland	Fire Protection	City of Woodland
Recycled Water	City of Woodland	Law Enforcement	City of Woodland
Wastewater	City of Woodland	Parks and Recreation	City of Woodland
Drainage and Flood Control	City of Woodland	K-12 Schools	Woodland Joint Unified School District
Electric Service	PG & E	Post Secondary Schools	Woodland Community College
Natural Gas	PG & E	Library	City of Woodland
Communications	AT&T, WAVE	Other Services	City of Woodland

## 5.2 | WATER SUPPLY

The City of Woodland Public Works Department currently provides municipal water to the boundary of the WRTP. Treated Sacramento River water supplied by the Woodland-Davis Clean Water Agency’s Regional Water Treatment Facility (RWTF) is the primary source of potable water. The City operates three aquifer storage & recovery wells, which store treated surface water in winter months to supplement RWTF supplied water in summer months. Groundwater is a backup

to the surface water supply and will supplement surface water during times of high demand or reduced surface water availability. The City maintains an Urban Water Management Plan (UWMP) that is updated every five years and describes the current and future water uses, sources of supply and its reliability, and existing and planned conservation measures. The 2020 UWMP was adopted by City Council in June 2021. The City also has a Groundwater Management Plan, adopted in 2010, to manage groundwater resources.

### 5.2.1 Existing Water Distribution System

The municipal water supply distribution system consists of 260 miles of transmission and distribution lines, a 3-million-gallon ground level storage tank, and a 400,000-gallon elevated storage tank, which is generally sufficient for peak demands and to regulate The Woodland-Davis Clean Water Agency (WDCWA) Intake Facility at the Sacramento River. Woodland has a dedicated capacity of 18-million gallons per day (mgd) of supply from the water treatment plant.

Aquifer Storage & Recovery (ASR) wells are also intended to store large quantities of treated surface water to meet peak summer demands and to prepare for future drought conditions. Three ASR wells are operational and can supply over 8 mgd of water with quality equal to WDCWA supplied water.

Currently there are six agricultural wells in use within the Plan Area: four of them are north of CR 25A and two of them are to the south. The two wells along SR 113, north of CR 25A, are to be preserved until no longer needed for irrigation of the surrounding agricultural land, including fields west of Highway 113 and south of CR 25A. These facilities will be secured and adequate setbacks will be provided. An access road will be maintained along the west boundary of the Plan Area, parallel to SR 113, allowing for routine maintenance of the wells by the owner. As development progresses, the well owner(s) shall reserve access rights to the well through the developed portion of the RTP.. The remaining wells shall remain in use to irrigate the surrounding agricultural land until development within SP-1A precludes their use or otherwise incorporated into the SP-1A layout for continued irrigation use within or outside the limits of the Plan Area.

Existing facilities in the general vicinity of the Plan Area include the following:

- 30" east-to-west water transmission main in Farmers Central Road corridor, from RWTF to Ashley Avenue.
- 12" east-to-west water distribution main in Farmers Central Road corridor, connecting to above- referenced 30" transmission pipe.
- 12" north-to-south water main in Harry Lorenzo Avenue, connecting to the above-referenced 12" pipe, from Farmers Central Road to ±500' to the south



- 12" east-to-west water main in Parkland Avenue, assumed to be extended to boundary of WRTP prior to development
- 12" east-to-west water main in Marston Drive
- 8" south-to-north water main in Harry Lorenzo Avenue, connecting to the above-referenced 12" pipe, from Marston Drive to  $\pm 1300'$  to the north
- 8" east-to-west water main in CR 25A, stubbed at Harry Lorenzo Ave., assumed to be constructed prior to development.

### **5.2.2 Proposed Water Distribution System**

Potable water will be distributed throughout the WRTP via a pressure system and routed to serve all areas within the plan area, including for irrigation. Once recycled, water from the City Water Pollution Control Facility (WPCF) (See Section 5.2 below) is connected to the WRTP recycled water pipe network, the potable water will be isolated from portions of the plan with public irrigation demands, such as parks, greenbelts, and street medians. Table 5.2 contains an estimate of water demand for the WRTP.

Proposed Water Distribution System, Exhibit 5-1, depicts the backbone infrastructure designed to connect to the existing transmission mains and distribute domestic water throughout the WRTP. The proposed points-of-connection for the system are along the existing 12" main in Harry Lorenzo Avenue: at Fowler Way, Parkland Avenue and Marston Drive. In addition, there will be a connection at the intersection of CR 25A and the former extension of Harry Lorenzo Avenue (removed in favor of a future greenbelt).

The network leading from these connections was designed in accordance with the City of Woodland Engineering Standards (COWES) to provide looping of the system, and minimum spacing of 12-inch lines at approximate one-half (1/2) mile intervals.

The public water supply pipelines are all located within the right-of-way of public streets or roads, with pipelines larger than 8 inches located in collectors and arterials. Additional pipelines were shown connecting the portion south of CR 25A back to the main network to ensure looping in this branch of the system.

Confirmation of adequate flow and pressure within the WRTP will be determined by the City of Woodland with each Tentative Map submittal. Further details on water supply are contained in the WRTP Water Distribution Memo, prepared 1/7/20.

Land Use Designation	Acres	Water Demand Coefficient (gpd/acre)	Add'l R&D Water Use Demand Factor (gpd/acre) <sup>4</sup>	Average Day Demand (gpm)	Peaking Factor (Average Day to Max Day)	Maximum Day Demand (gpm)	Peaking Factor (Max Day to Peak Hr)	Peak Hour Demand (gpm)
LDR	74.8	3,168	0	165	2.2	362	3.5	576
MDR	35.5	6,480	0	160	2.2	351	3.5	559
<sup>1</sup> HDR	9.7	12,960	0	87	2.2	192	3.5	305
RTP-TO	69.6	1,440	0	70	2.2	153	3.5	243
<sup>5</sup> RTP -RFO	35.9	2,448	490	61	2.2	135	3.5	215
<sup>2</sup> RTP -CCO	6.8	1,728	144	8	2.2	18	3.5	29
VCMU	3.5	2,880	0	7	2.2	15	3.5	25
VCMDR	16.7	6,480	0	75	2.2	165	3.5	263
VCLDR	13.1	3,168	0	29	2.2	64	3.5	101
<sup>3</sup> HDR-CCO	15.9	7,448	0	83	2.2	182	3.5	289
HC	8.2	2,016	0	11	2.2	25	3.5	40
PP	0.8	2,160	0	1	2.2	3	3.5	4
OS	10.2	2,160	0	15	2.2	34	3.5	54
VCOS	10.8	2,160	0	16	2.2	36	3.5	57
<b>Total</b>	<b>311.4</b>			<b>788</b>		<b>1734</b>		<b>2759</b>

<sup>1</sup> Demand assumed to be double that of Medium Density Residential.

<sup>2</sup> Land use assumed to be 50% Research and Technology Park and 50% Community Commercial.

<sup>3</sup> Land use assumed to be 50% High Density Residential and 50% Community Commercial.

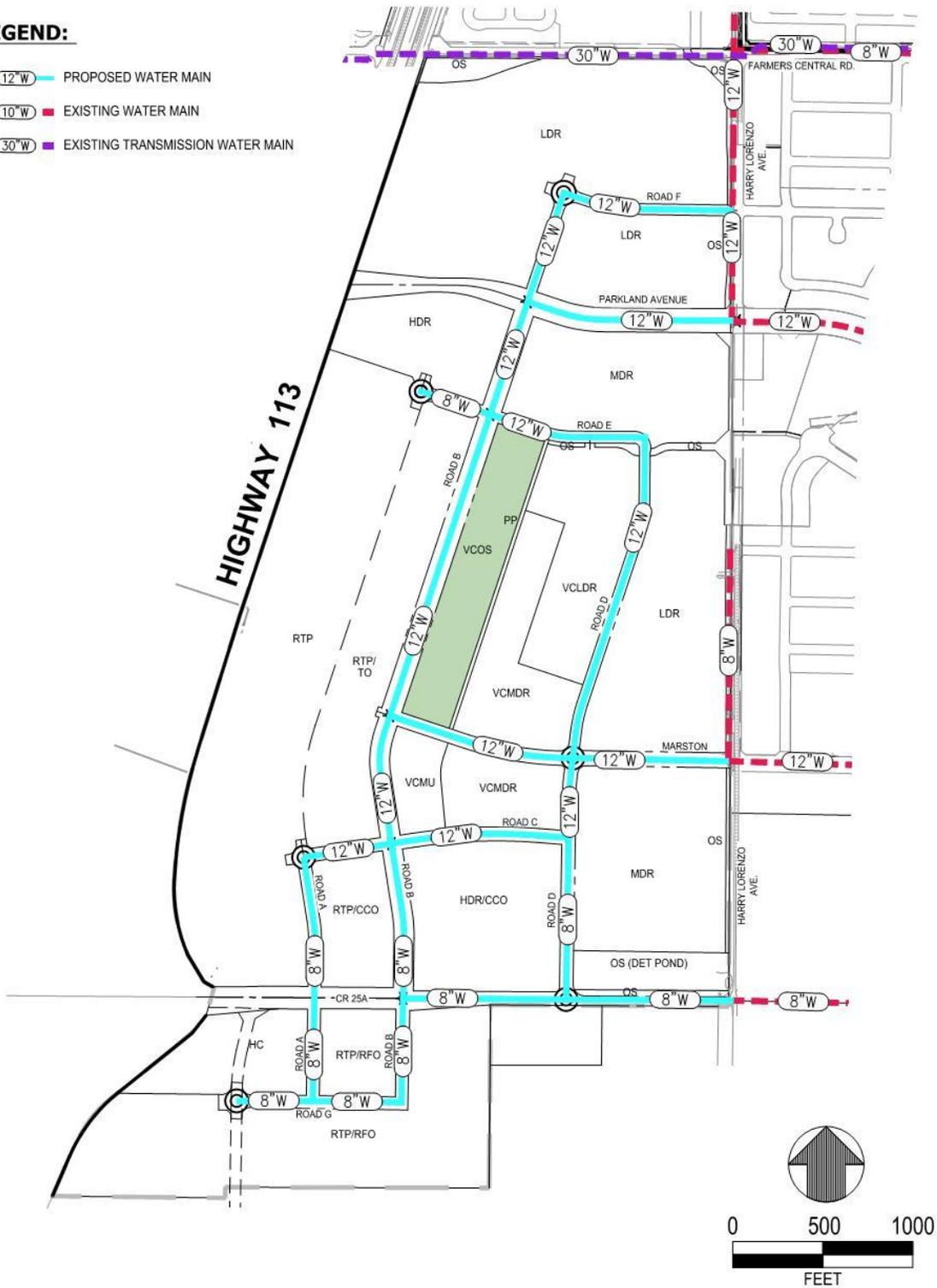
<sup>4</sup> 20% increase in demand for agricultural research and development tenants in Research Park/Community Commercial and Research Park/Research Flex.

<sup>5</sup> Land use assumed to be 100% Industrial/Agricultural.



**LEGEND:**

- 12" W PROPOSED WATER MAIN
- 10" W EXISTING WATER MAIN
- 30" W EXISTING TRANSMISSION WATER MAIN



**EXHIBIT 5-1: PROPOSED WATER DISTRIBUTION SYSTEM**

## 5.3 | RECYCLED WATER DISTRIBUTION

Recycled water refers to wastewater treatment plant effluent which has received a level of treatment such that it meets the State requirements for direct non-potable use. Recycled water use is regulated by the State Water Resources Control Board which applies stringent water quality, treatment, and disinfection standards. Recycled water in Woodland meets the Title 22 requirements for tertiary level treatment with disinfection.

### 5.3.1 Existing Recycled Water System

The City of Woodland Public Works Department does not currently provide a continuous recycled water main connection from the Water Pollution Control Facility (WPCF) to the boundary of the WRTP. The recycled water utility currently serves parks and the north industrial area. The recycled water utility is planned to be expanded into the Spring Lake and WRTP areas to serve primarily commercial uses and landscape irrigation. This expansion project is currently planned for construction in 2024.

Additional connections to the recycled water system have been deemed infeasible.

### 5.3.2 Proposed Recycled Water Distribution System

Recycled water will be conveyed to the WRTP via a pressure system and routed to serve areas with commercial and public irrigation demands.

Tables 5.3 and 5.4 contain estimates of recycled water demand for the WRTP. Further details are contained in the WRTP Recycled Water Distribution Memo, prepared 3/31/20.

**Table 5.3 – Recycled Water Demand Coefficients by Land Use Classification**

Land Use Code	Land Use Classification	GPM/Gross-Acre
OS	Open Space	1.5

**Table 5.4 – Average Day, Max Day and Peak Hour Demands**

Land Use	Acres	Average Day Demand Factor (gpd/acre)	Average Day Demand (gpd)	Average Day Demand (gpm)	Peaking Factor (Average Day to Max Day)	Max Day Demand (gpm)	Peaking Factor (Max Day to Peak Hr)	Peak Hour Demand (gpm)
Park (OS)	10.8	2,160	23,263	16.2	2.2	35.5	3.5	56.5
Greenway (OS)	6.0	2,160	12,982	9.0	2.2	19.8	3.5	31.6
Median (OS)	1.6	2,160	3,456	2.4	2.2	5.3	3.5	8.4
<b>Total</b>	<b>18.4</b>		<b>39,701</b>	<b>27.6</b>		<b>60.7</b>		<b>96.5</b>

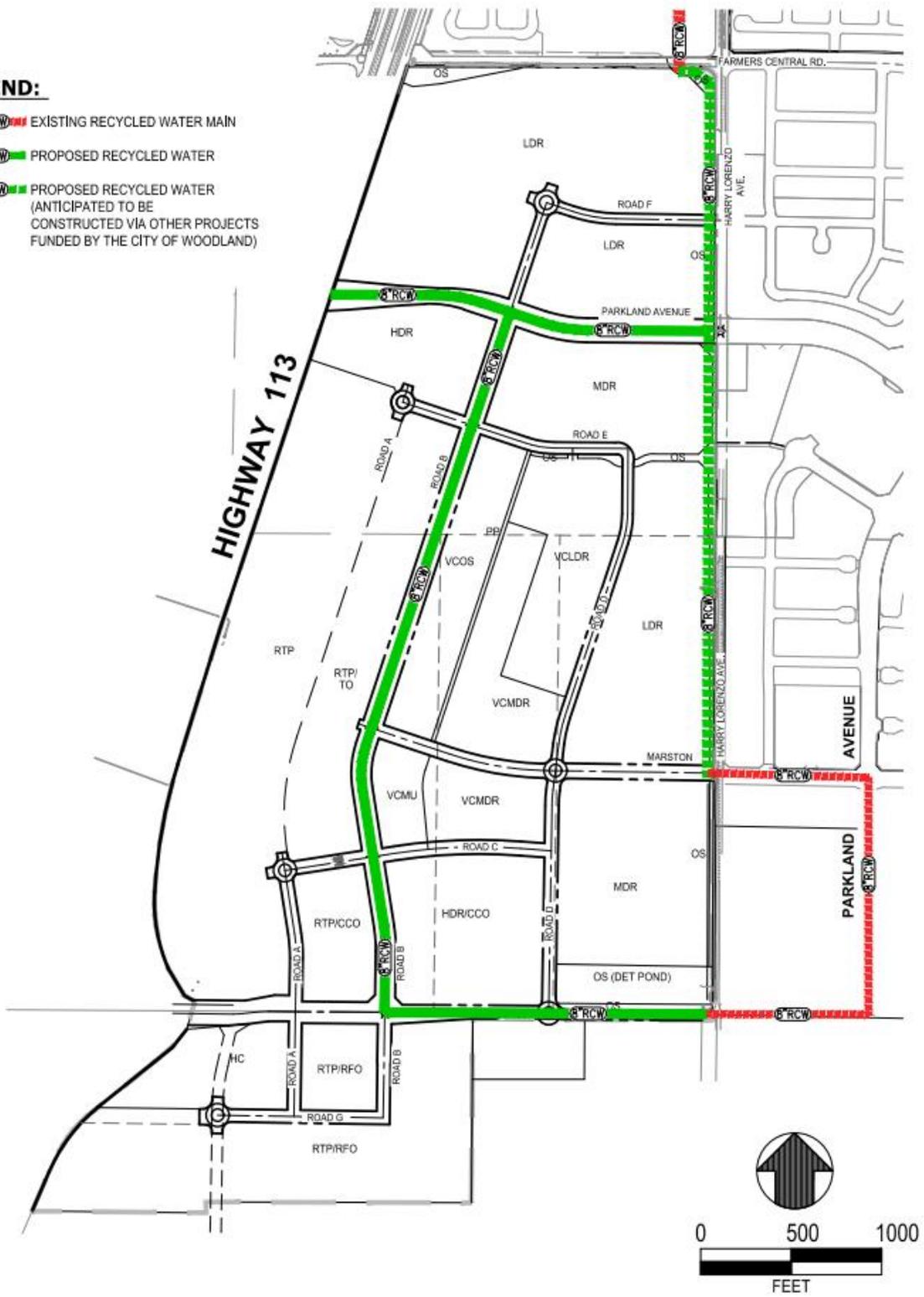
The recycled water network within the project is designed to provide service to areas with commercial and public irrigation demands such as medians, parks, and greenways. Due to the nature of this development, a main is planned to be stubbed south of CR 25A to provide service for potential future demands of the agricultural research that is anticipated to be conducted in the Research Flex Overlay land use. The public recycled water supply pipelines are all planned to be located within the right-of-way of public streets and greenways.

The preliminary recycled water layout in Exhibit 5-2 depicts the backbone infrastructure designed to connect to the existing transmission mains and to distribute recycled water throughout the WRTP. The proposed point-of-connection for the system is at the existing 8-inch main south of Osborn Drive and Farmers Central Road.

The main will then be routed south down the greenway along the west side of Harry Lorenzo Avenue, terminating at Marston Drive where it will connect to existing recycled pipelines within the Spring Lake Specific Plan area. From Harry Lorenzo, the WRTP network will extend along Parkland Avenue Marston Drive, and Road B. Refer to the Water Distribution technical memorandum for more details.

**LEGEND:**

-  EXISTING RECYCLED WATER MAIN
-  PROPOSED RECYCLED WATER
-  PROPOSED RECYCLED WATER (ANTICIPATED TO BE CONSTRUCTED VIA OTHER PROJECTS FUNDED BY THE CITY OF WOODLAND)



**EXHIBIT 5-2: PROPOSED RECYCLED WATER DISTRIBUTION SYSTEM**



## 5.4 | WASTEWATER

The City of Woodland provides wastewater collection and treatment throughout the City limits. The City constructed the current WPCF in 1989. Since that time, the City has upgraded the facility three times—once in 1999 and a second time in 2006, when the City expanded and upgraded the treatment plant’s hydraulic capacity from 7.8-mgd to 10.4-mgd. The City expanded the plant a third time in 2016 to increase solids handling capacity among other upgrades. In recent years, hydraulic inflows to WPCF have gone down due to water conservation and the City’s efforts to reduce infiltration and inflow, through sewer collection system rehab projects.

### 5.4.2 Existing Wastewater System

The City of Woodland’s Public Works Department is the community’s wastewater service provider. Woodland’s wastewater collection system conveys wastewater by gravity pipelines to the WPCF located east of the city along CR 103, where it is treated and then discharged to a large unimproved channel. Treated wastewater eventually drains to the Tule Canal on the east side of the Yolo Bypass. Woodland’s wastewater collection system consists of 270 miles of sewer main and 80 miles of service line. Projected future flows to the WPCF are about 9.2-mgd for average wastewater flows, which could serve up to 105,000 residents.

Downstream existing facilities in the general vicinity of the Plan Area include the following:

- 2 x 12” force mains, from the SLSP Pump station at Farmers Central Road and Mickle Avenue, west-to-east on Farmers Central Road, south-to-north on CR 102 and west-to-east on Gibson Road to the WPCF
- 15” to 21” west-to-east sewer main in Farmer’s Central Road corridor, from SR 113 to the SLSP Pump Station at Mickle Avenue
- 15” west-to-east main in Heritage Parkway. This will need to be extended from the terminus of Heritage Parkway to the east edge of the WRTP. It is essential that an easement be reserved for the proposed 15” sanitary sewer pipe extending from Heritage Parkway.
- 10” west-to-east main in Marston Drive.

The Spring Lake Specific Plan (SLSP) Pump Station was constructed at the intersection of Farmers Central Road and Mickle Avenue in order to get the wastewater from Spring Lake to the WPCF, a regional pumping station. The facility is designed to run at maximum design capacity of 6.1-million gallons per day (mgd). There are currently no wastewater mains or services located within the Plan Area.

### 5.4.3 Proposed Wastewater System

A combination of gravity and pressure sewers will be required to convey new wastewater flows to the WPCF. Upgrades made to the WPCF since 1989 will allow the facility to accept the project flows. The SLSP Pump Station has the capacity for the wastewater flows at buildout of the WRTP; however, there are portions of SP-1A and SP-1B that will require a lift/pump station in order to convey wastewater runoff to the existing gravity main in SLSP.

The Proposed Wastewater System, Exhibit 5-3, shows the components of the proposed backbone infrastructure locations and sizing to convey the wastewater produced by the WRTP to the WPCF depicting the sizing and locations of major onsite wastewater collection facilities.

The proposed points-of-connection for the system are at the existing 8" main in Harry Lorenzo Avenue at Fowler Way (future), the proposed 15" main extending from Heritage Parkway, and the existing 10" main in Marston Drive. It is essential that an easement is reserved for the proposed 15" main extending from the future Heritage Parkway in the event that the pipeline is not constructed prior to initiating development of the WRTP.

The WRTP site is relatively flat, (elevation drop of about 10 feet west-to east and negligible elevation change north-to-south). With these general grades driving the proposed gravity sewer network design, the proposed points-of-connection are located along the eastern boundary of the WRTP. Preserving the existing drainage patterns of the site, the overall shed has been divided into three main lines: Line J (North Shed, north of Parkland Avenue), Line I (Central Shed, between Parkland Avenue and Marston Drive) and Line U (Southern Shed, south of Marston Drive). Line designations have been selected to coincide with the 2004 SLSP Infrastructure Study Report. Because of the flat topography within the Site, it is expected that grading plans and street profiles will generally be undular, with alternating shallow crests and sags. It is essential that sufficient cover is provided for the wastewater pipes at the roadway sags.

The SLSP Pump Station, located at Farmers Central Road and Mickle Avenue, has the capacity for 6.1- mgd of wastewater at buildout utilizing two 90 horsepower (HP) pumps with an additional pump for redundancy. The facility was not originally designed for the updated Urban Limit Line (ULL). An analysis of projected flows from the SLSP, SP-1A (including the updated ULL), the Community Center, and the Prudler Subdivision, prepared by the Project Applicant's engineer (Cunningham Engineering Company) indicated that upon buildout of these areas the cumulative peak wastewater flow would be 5.45-mgd. The limits of the properties that account for the projected 5.45 mgd of wastewater flows are depicted below in Exhibit 5.4. Based on that analysis, it was concluded that the SLSP pump station, as it is currently designed, would have adequate capacity for the SLSP and SP-1A.



Subsequent peer review by City wastewater consultant (Water Works Engineers), identified that the City Design Standards methodology used by the Project Applicant's engineer to calculate anticipated water infiltration and inflow (I&I) was not applicable to existing development within the Spring Lake Specific Plan development. Rather, the City's current methodology for determining I&I for existing development is to use the rain derived inflow and infiltration (RDII) via the "RTK" hydrological analysis using 5yr return 24hr duration design storm conditions. In using the 5yr/24hr RTK RDII methodology for existing development (approx. 680 acres) it was determined that projected build-out flows of Spring Lake Specific Plan and WRTP (SP-1A) would be approximately 7.4 mgd, which exceeds the current capacity of the SLSP Pump Station.

The existing pump station is currently operating with 2 aging 90 HP pumps, which have always been anticipated to be replaced at the end of their useful life of approximately 20 years. Installed in 2004, they will require replacement in the next 3 to 5 years.

Water Works Engineers prepared a Spring Lake Pump Station Capacity Enhancement Assessment Technical Memorandum wherein they identified alternatives to for increasing the capacity of the pump station through pump replacement, pump upsizing, and electrical upgrades. The report included the following conclusions:

- Existing flows from Spring Lake are nearing the capacity of the existing pumps operating one at a time; hence, without the installation of a planned third pump, the pump station will no longer have redundancy.
- Replacing the existing 2 pumps with modern 90 HP, efficient pumps will increase the capacity to approximately 3.7 mgd with redundancy for the current measured flows.
- New rain gauges have been installed that will provide updated information for future analysis.
- Adding a 3<sup>rd</sup> new 90 HP pump will increase the pump station capacity to approximately 7.5 mgd with the 3<sup>rd</sup> pump providing redundancy.

The timing of pump replacements and additions will be determined by the City based on the recommendations presented by Water Works Engineers; however, addition of a 3<sup>rd</sup> pump for backup redundancy will be required to develop SP-1A. Additional pump station upgrades will need to be analyzed in the future, or an alternative solution provided for subsequent SP-1B and/or SP-1C developments.

The discussion above focuses on the capacity of the SLSP Pump Station. An analysis was also conducted to determine if future wastewater generated from properties located within the ULL update area, specifically the portion of the Plan Area south of CR 25A could be conveyed via gravity flow. , The area hatched in the southwest corner of the Proposed Wastewater System (Exhibit 5.3)

(approximately 7.3 acres) will require either a lift station or several feet of fill soil to convey wastewater runoff to the existing gravity main in SLSP. The pump size for a lift station option has not yet been determined and would need to be based on wastewater flow rate generated by the land use at the time of site design. The cost for this improvement has not been included in the WRTP CIP. The capital and maintenance costs will need to be shared by the property owners that require the pump station for the development of their property.

The area in SP-1B that cannot be serviced via gravity in SP-1A is shown in Exhibit 5-4. A pump station along 25A and 3,000 LF of force main will be required to connect SP-1B development to the WPCF. Further details on the wastewater system are contained in the WRTP Wastewater Collection System Memo, prepared 3/31/20.

## 5.5 | STORMWATER MANAGEMENT

The proposed onsite drainage system will consist of collection and conveyance facilities that will carry stormwater via gravity generally from west to east through the SLSP area. Wherever feasible, storm drain pipes have been designed to flow full under gravity in the 10-year storm. Based on peak flow in major storm drain pipes during a 10-year storm, the existing downstream conveyance system has adequate capacity to accept the stormwater generated from the WRTP.

### 5.5.1 Existing Conditions and Stormwater Management System

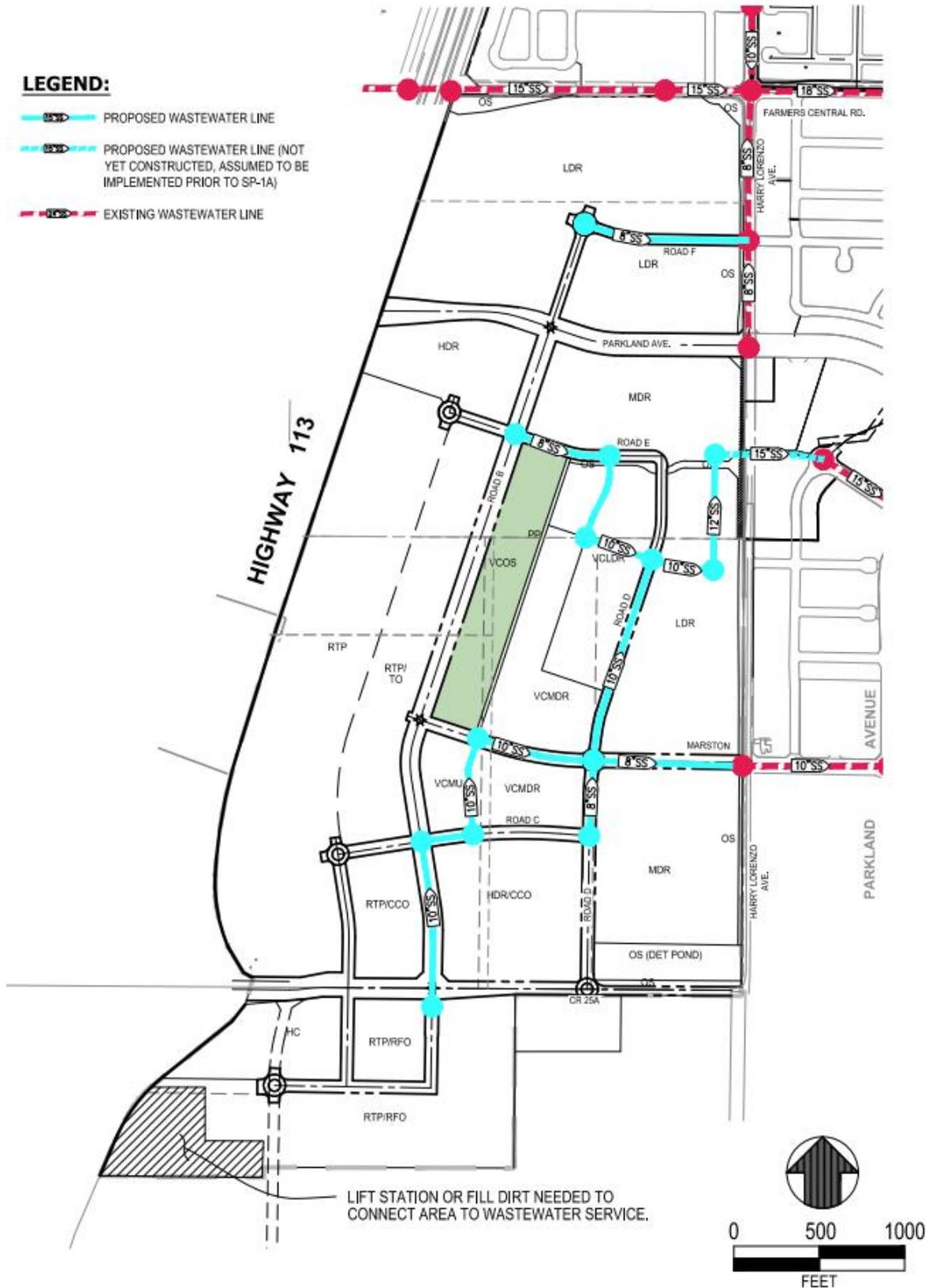
The WRTP is relatively flat, with an elevation drop of about 10 feet west-to-east and a negligible elevation change north-to-south. West-to-east ground slopes range from 0.2% to 0.4%.

There are no natural streams or waterways on the WRTP, nor is there currently a developed onsite drainage system capable of managing future flows from development of the WRTP. Minor roadside ditches accept runoff from county roadways, and agricultural ditches and culverts currently manage local agricultural runoff within the Plan Area.

Under developed conditions, the drainage from the project site can be divided into six main sheds, as shown in the WRTP Stormwater Management Memo (7/12/23). The limit lines of the six proposed sheds are generally consistent with the shed limits originally identified in the 2004 Spring Lake Specific Plan (SLSP) Infrastructure Study Report (ISR) and reflected in subsequent updates to the City's South Urban Growth Area SDFMP.

**LEGEND:**

-  PROPOSED WASTEWATER LINE
-  PROPOSED WASTEWATER LINE (NOT YET CONSTRUCTED, ASSUMED TO BE IMPLEMENTED PRIOR TO SP-1A)
-  EXISTING WASTEWATER LINE



**EXHIBIT 5-3: PROPOSED WASTEWATER SYSTEM**





the eastern green belt is constructed, development phasing plans will need to account for the relocation of agriculture storm drainage conveyances that are currently located in the Harry Lorenzo Avenue corridor.

The Federal Emergency Management Agency (FEMA) delineates the boundaries of the FEMA 100-year floodplain on the basis of hydrology, topography, and modeling of flows during specified design rainstorms. The maps indicate that the WRTP is located in Zone X, which depicts areas determined to be outside the 0.2% chance annual floodplain. There are no special development considerations or insurance requirements affecting the site.

According to the Natural Resources Conservation Service (NRCS) Soils Survey, the site area contains soils classified as Hydrologic Soil Group (HSG) 'B' (56% of site area) and HSG 'C' (41%), together with a small pocket of HSG 'A' (3%). North of Parkland Avenue, virtually all the site area is mapped as having HSG 'B' soils. South of Parkland, HSG 'B' predominates on the western portion of the site; HSG 'C' on the easterly portion.

### **5.5.2 Adjacent/Downstream Drainage Facilities**

Downstream existing drainage facilities in the general vicinity of the WRTP include the following:

- 60" to 72" west-to-east storm drain pipe in Farmers Central Road corridor, from SR 113 to the head of the Farmers Central Channel (FCC) near Pioneer Avenue.
- 30" to 48" south-to-north storm drain pipe in Harry Lorenzo Avenue (HLA), draining to the above- referenced 72" pipe.
- 60" to 66" south-to-north storm drain in Pioneer Avenue, draining to FCC (with an upstream 54" to 60" pipe proposed between HLA and Pioneer).
- 48" to 2-66" west-to-east storm drain pipe in Heritage Parkway, plus a 30" west-to-east storm drain pipe extension which may be installed prior to initial construction of the WRTP. If it is not constructed by others prior to SP-1A, then an easement will need to be reserved for a proposed 30" storm drain pipe extending from Heritage Parkway.
- 42" north-to-south storm drain within the existing right-of-way of HLA extending from the south side of CR25A approximately 40 north of the northern 25A right-of-way. Said pipe outfalls into an unlined channel located along the south side of CR 25A (see next item below).
- West-to-east unlined channel along the south side of the CR 25A corridor, beginning east of HLA and continuing east.

### **5.5.3 Proposed Stormwater Management System**

The proposed onsite drainage system will consist of a system of collection and conveyance facilities, which will carry stormwater via gravity generally from west to east towards HLA. From there, existing offsite facilities will convey runoff to the east through the SLSP area.

Major constraints affecting storm drainage for the WRTP include limited fall for gravity drainage, (particularly in a north/south direction), and a significant upstream area discharging agricultural runoff through the development area.

## **1. PROPOSED CONVEYANCE SYSTEM**

The major parameters to be used in the design of storm drainage facilities for the WRTP will include the computed peak flow rates and runoff volumes for selected design. For the onsite conveyances, the key parameter is the peak runoff rate (10-year for pipes, 100-year for channels and overland release). For offsite conveyances (such as those originating from SP-1B), the key parameter is the 100-year peak runoff rate. For regional detention facilities, key sizing parameters are the 100-year peak flow and runoff volume.

**10-Year Storm Routing.** Developed on-site flows will be conveyed generally from west to east through new storm drainage pipes. Pipes will usually be located in public streets or in proposed storm drain easements. Storm drain pipes will be designed to flow full under gravity in the 10-year storm. In general, the 10-year hydraulic grade line (HGL) is typically contained within the pipe wherever feasible. If the 10-year HGL rises above the pipe soffit, designs will seek to maintain the HGL at least 1 foot below finish grade.

**100-Year Storm Routing and Release Point.** The downstream (east) edge of the overall WRTP shed lies along the HLA corridor, and 100-year release points from the overall shed are in general expected to be along HLA between CR 25A and the FCC.

Within the Plan Area, on-site flows in excess of pipe capacities (i.e. in excess of the 10-year flows) will be conveyed overland via collector and arterial streets, and in greenbelt corridors. Release points for the 100-year storm will be provided for all onsite developed drainage sub-areas. It is expected that the overland flow patterns will generally follow the direction of piped (10-year) flows.

In general, local street profiles are expected to be designed such that low points overflow when the water depth reaches a maximum of 1 foot. Overflows should be able to “cascade” over successive local street high- points to an outlet downstream. Individual development sites (such as single-family subdivisions, multifamily apartment sites, or portions of the research park/business park element) should typically be designed such that their 100-year release points discharge to an abutting collector or arterial street,

Such streets will have an overland flow path to the downstream end of the WRTP. Overland release may also be to an abutting channel, sized for the 100- year/24-hour peak flow with one foot of freeboard. Alternatively, overland flow may be conveyed in greenbelts provided that (a) the



greenbelt connects directly to a downstream channel or arterial street, (b) the greenbelt can be shown to have sufficient hydraulic capacity to carry the 100-year flow from its ultimate developed contributing area, and (c) frequent flows will not compromise the primary function of the greenbelt as an amenity.

Runoff from offsite shed HW20, located west of SR 113 and north of CR 25A, will be intercepted by a proposed onsite interceptor/conveyance channel to run along the east side of SR 113 and then for about 500 LF along the north side of CR25A. It will be sized for the estimated 100-year peak discharge from the existing (undeveloped) HW20 shed.

Allowance will be made on one side of the channel for a 12- foot maintenance/access road. The downstream segment of the swale along CR 25A will discharge to a proposed 54" to 60" storm drain pipe just west of the proposed intersection of CR25A with WRTP Road 'A'. The pipe, to be sized for the 100-year peak flow from HW20 plus contributing areas in the WRTP, will cross onto the south side of CR 25A and continue east to the proposed South Regional Pond (SRP).

The SRP will be located east of SR113, just south of CR25A. Adequate storage should be provided to manage development from a portion of the sheds located east of SR113. The sizing of the pond is currently shown on Figure 5-5 as approximately 4.5 acres. This sizing is preliminary and will be refined in conjunction with the design of backbone infrastructure for the southern portion of the WRTP.

Outfall from the SRP will be via a drainage channel (approximate size is shown on Section T included in Chapter 4) that will connect to the existing channel located along the southern boundary of Spring Lake. There is an existing 8" gas main in a north-south alignment along the west side of the gravel extension of Harry Lorenzo Ave which the channel will need to cross to connect to the existing channel. To connect the channels together and avoid vertical relocation of the gas main, one 4' high by 6' wide box culvert will be required.

## **2. STORMWATER QUALITY, LOW IMPACT DEVELOPMENT (LID) AND HYDROMODIFICATION CONSIDERATIONS**

Based on the requirements of the State Water Resources Control Board (SWRCB) NPDES General Permit, water quality (WQ) treatment design for the WRTP will be addressed by implementing LID measures, standard Treatment Control BMPs, and 'end-of-pipe' WQ storage within existing and proposed detention basins and upland LID-style runoff-reduction measures and end-of-pipe detention storage within existing and/or proposed detention basins. Key LID elements will include:

**At-source drainage management.** This entails integration of small-scale distributed drainage management features such as shallow, decentralized surface detention areas and/or infiltration

areas that are consciously designed into streetscapes and individual site landscapes throughout the project area. An at-source drainage management approach encourages the use of drainage as a design element, rather than solely as a functional requirement. Landscape and engineering designs for proposed developments within the project site should be developed collaboratively from the outset.

**Reduction of new impervious areas.** This can be accomplished with compact building footprints, alternative driveway layouts and/or materials, narrower roadway cross-sections (as appropriate), pervious pavement and efficient parking layouts. For all parking lots, the following elements can help reduce impervious areas:

- Efficient layouts that seek to minimize the overall area of the lot on a per-parking-space basis.
- Examination of parking minima/maxima, with the intention of not 'overparking' site designs.
- Construction of parking areas from pervious materials.
- Exploration of shared parking opportunities for adjacent non-concurrent uses.
- Use of tree canopies for runoff interception.

**Disconnection of new impervious areas.** This can be accomplished through judicious site design that places pervious areas (landscaping and/or pavement) downstream of a site's impervious surfaces (roofs and conventional pavement), with site grading/landscaping designs that provide for sheetflow from those impervious surfaces onto pervious surface areas. This would include avoidance of direct connection of roof downspouts to the receiving storm drain pipe system and landscaped areas immediately upstream of DI's receiving runoff from new pavement areas. Treatment Control BMP's will typically include:

- Vegetated swales. Swales can be readily integrated into most site developments provided they are planned for at an early stage of the site design. The key is in integrated planning and design collaboration between all members of the site design team.
- Stormwater planters/rain gardens. Similarly, integrated design of site improvements can allow for the incorporation of rain gardens into planned low points in the site landscape areas.
- Pervious pavements. These can be well-suited to parking lots and access drives. They may consist of pervious asphalt, pervious concrete or pavers.
- End-of-Pipe Water Quality Storage. Proposed detention basins serving the Site will include a water quality component, typically a shallow (roughly 1' to 3' deep) water-quality retention pool below the detention storage pool.



### 5.5.4 Phasing of Drainage Facilities

Phasing of drainage facilities within the Plan Area will be mostly guided by development phasing. However, installation of major facilities to serve the Plan Area is expected to proceed from downstream to upstream (i.e. east-to-west from HLA towards SR113).

The SDFMP estimates that 30 cfs of pumping and construction of the North Regional Pond will accommodate the buildout of the SLSP plus approximately 80 additional acres of currently unbuilt residential development, flowing to the existing Farmers Central Channel, in addition to the SLSP. These improvements have recently been constructed. Since these improvements benefit other properties, the WRTP will be required to contribute a pro rata financial share toward the construction of these regional facilities. It is assumed that non-residential development could alternatively be accommodated, as long as the development acreage is hydrologically equivalent to 80 acres of residential use. Development of more than the equivalent of 80 acres within the WRTP will trigger further improvements to the new pump station, the East Main Channel and the Yolo Bypass Outfall.<sup>1</sup>

As a result of modeling being performed for the City's North Area, by the City's drainage consultant (Wood Rodgers) it has been determined that a greater allowable flow over the downstream High Line Ditch than previously modeled is likely. With the recently installed downstream infrastructure upgrades described above and an assumed higher allowable spill over the High Line Ditch, it is anticipated that more development in the Plan Area can occur before triggering additional Plan Area or downstream improvements.

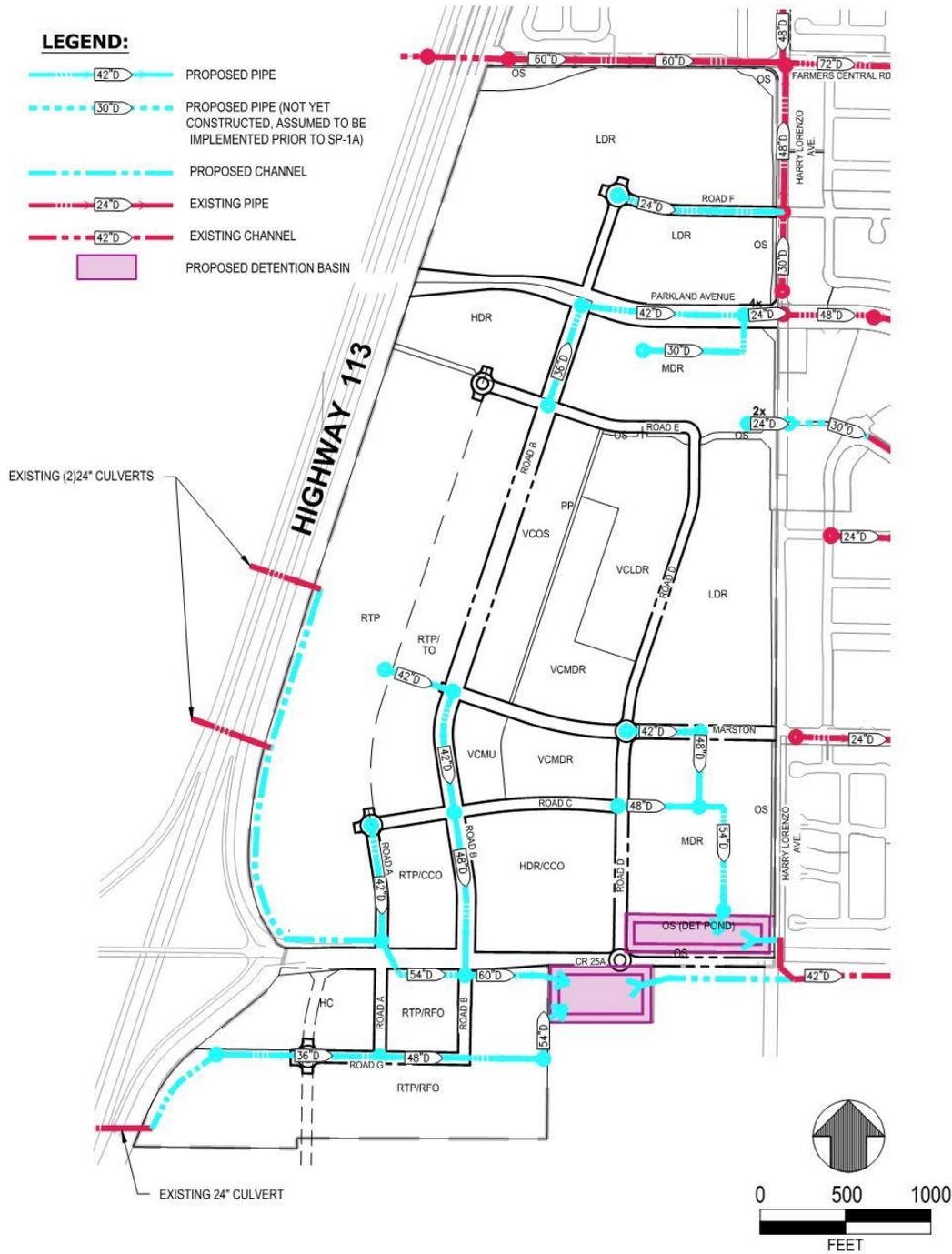
Revised baseline conditions modeling and detailed information defining the operational capacity of the recently installed infrastructure will need to be determined prior to allowing development beyond 80 residential equivalent acres to proceed.

### 5.5.5 Land Acquisition for Drainage Easements

Land acquisition or easement requirements for regional drainage facilities will consist of:

- An easement on the Beeman property south of CR25A for the proposed SRP.
- Easement for a north-to-south interceptor/conveyance and gravel access road along the east side of SR 113 (north of CR25A), and a west-to east conveyance and gravel access road along CR25A to convey runoff from SDFMP subshed 'HW20' to the SRP.
- Easement for a south-to-north conveyance east of SR113 (south of CR25A) to convey runoff from SDFMP subshed 'SB101' to the SRP.

Exhibit 5-5 depicts the proposed backbone infrastructure for drainage and stormwater management. More detailed information is contained in the WRTP Stormwater Management Memo (7/12/23).



**EXHIBIT 5-5: PROPOSED DRAINAGE AND STORMWATER SYSTEM**



## 5.6 | ELECTRIC POWER

### 5.6.1 Existing Conditions

Pacific Gas and Electric (PG&E) provides electricity and gas to the City. In June 2018 Valley Clean Energy began providing electricity in Woodland as “cleaner energy” alternative; however, distribution of said electricity remains the responsibility of PG&E.

PG&E operates and maintains a 60 kV electric transmission line, along with corresponding distribution facilities, adjacent or within the project site boundaries. Land uses are restricted along the transmission facilities.

The 60kV electric transmission line is located immediately north of the WRTP within the Farmers Central utility corridor. Generally, it is considered infeasible to underground high voltage electric transmission lines; however, the poles are located along the northern portion of the Farmers Central utility corridor and are not anticipated to be an impact to developing the project.

A 12kV overhead electric distribution line currently exists along the east boundary of the WRTP along Harry Lorenzo Avenue from Farmer’s Central Road to and continuing south of CR 25A. The poles are located along the west side of Harry Lorenzo Avenue from Farmers Central Road and transition to the east side of the roadway approximately ½-mile to the south. A service pole line extends into the interior of the WRTP approximately 2,300 feet north of Harry Lorenzo Avenue to provide power to the agricultural buildings.

Similarly, there is another 12kV distribution line along the north side of CR25A which continues northwards within the WRTP adjacent to the Highway 113 northbound onramp, to a point approximately 1,000 feet north of 25A where it provides power to an irrigation well prior to crossing HWY 113 toward the west. A second irrigation well located approximate 3,100 feet north of 25A along HWY 113 receives power from a service line from the west side of the highway, terminating at the well.

### 5.6.2 Planned Improvements

Implementation of the Specific Plan will require expansion of electrical distribution and transmission lines and related facilities. In addition to adding new distribution feeders, the range of electric system improvements needed to accommodate new growth may also include upgrading existing substation and transmission line equipment, expanding existing substation(s) to their ultimate build-out capacity, building new substations, and interconnecting transmission lines. The new development will be responsible for the costs associated with the necessary expansion and upgrading of the systems. Any authorized provider may provide the service.

More specifically, existing 12kV overhead electric distribution lines along Harry Lorenzo Avenue and/or CR25A may remain in place until adjacent property within the Plan Area is developed, at which time they shall either be placed underground or eliminated if the development is served from an alternative corridor. Similarly, as existing facilities within the Plan Area are taken offline overhead services to them shall be removed and new underground service in a joint trench shall be provided for the WRTP facilities.

## 5.7 | NATURAL GAS

### 5.7.1 Existing Conditions

PG&E operates and maintains an 8-inch gas transmission line, within and extending south of the project site along the west side of Harry Lorenzo Avenue.

Implementation of the Specific Plan will require the expansion of distribution and gas transmission lines, and related facilities to serve the WRTP. The new development will be responsible for the costs associated with the necessary expansion and upgrading of these systems. Any authorized provider may provide the service.

### 5.7.2 Planned Improvements

Initial gas service will likely be extended from gas distribution mains installed for the Spring Lake Specific Plan. Tying into the existing 8-inch gas transmission line would likely require the installation of a regulation station. The service provider will determine the desired distribution system.

Preliminary information regarding the depth of the 8-inch main indicates that to accommodate the proposed outfall conveyance channel from the South Regional Detention Pond a 4' x 6' box culvert will be required to be installed below the main to connect to the existing downstream channel. See Section 5.5.3 of this chapter for additional information regarding the box culvert.

## 5.8 | TELECOMMUNICATIONS

### 5.8.1 Existing Conditions

AT&T provides telephone service to existing land uses within the WRTP boundaries. Implementation of the Specific Plan will require the expansion of telephone system to serve the WRTP Area. The new development will be responsible for the costs associated with the necessary expansion and upgrading of any authorized system. Initial service will likely be extended into the WRTP along Harry Lorenzo Avenue.

Wave Broadband provides television cable and broadband to the Plan Area.



## 5.9 | FIRE PROTECTION

The project site is within the jurisdiction of the Woodland Fire Department which provides fire protection services and emergency medical services within the City and to unincorporated areas in the vicinity. The City of Woodland serves its community with three permanent fire stations, each of which is staffed by firefighters 24 hours a day, 7 days a week.

The closest station to the Plan Area is Station Three located at 1550 Springlake Court, on the east side of SR 113, approximately 2 miles north of the Plan Area. The Departments' current Insurance Services Office (ISO) rating is three, with one indicating excellent service and ten indicating minimal or no protection. ISO ratings reflect firefighting personnel, equipment, and response times. The City has a maximum "first response" standard of four minutes.

The City plans to relocate Fire Station Three to the former Willow Spring Elementary school site, which is located at the northwest corner of Bourn Drive and Gibson Road., as shown on Exhibit 5-6, Public Services Proximity. The future Fire Station Three, located approximately one-half mile north of the Plan Area, will provide service to the Plan Area.

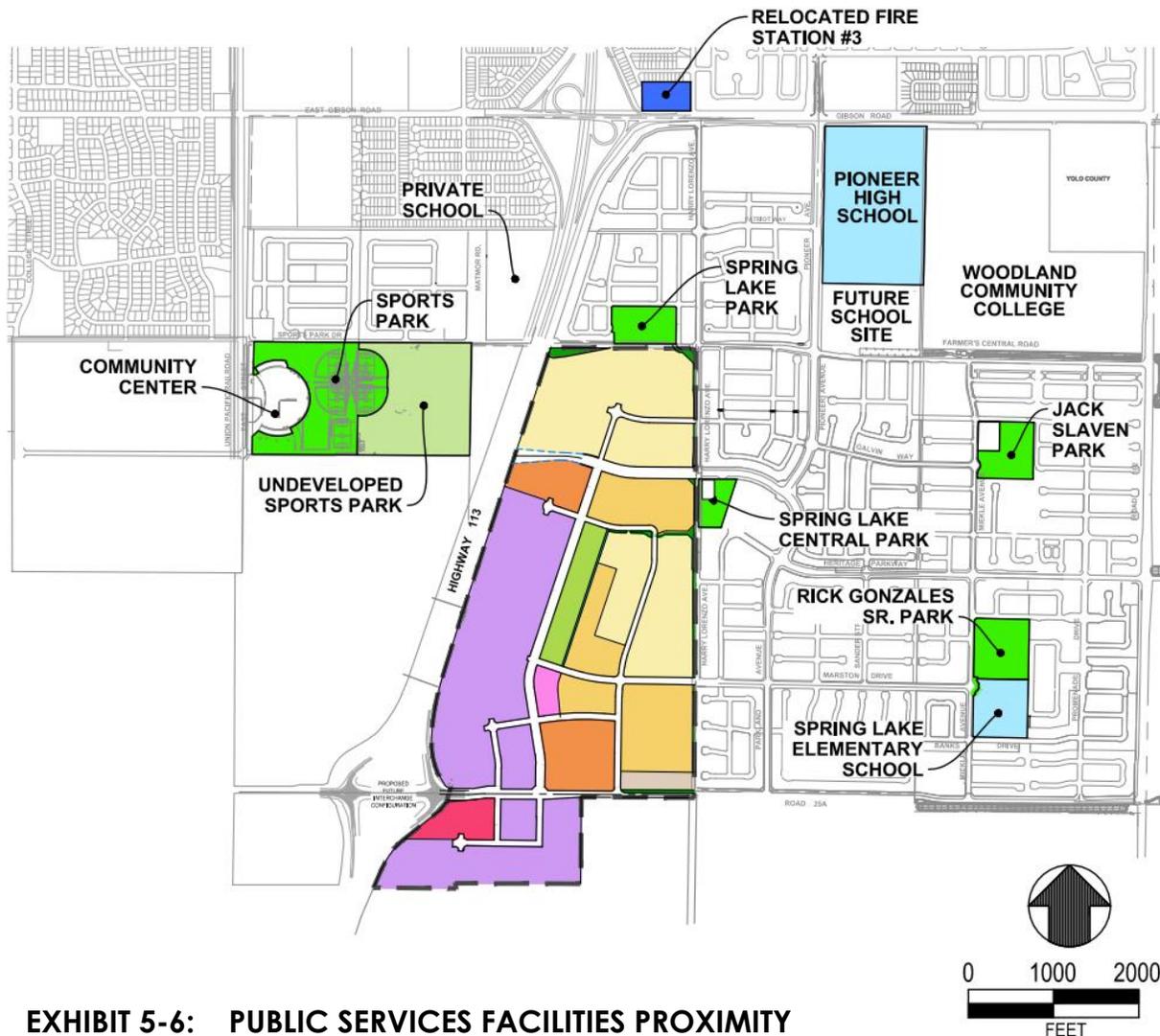
## 5.10 | LAW ENFORCEMENT

The Woodland Police Department will provide law enforcement services in the Plan Area. The Department currently services the community through a four police beat deployment model. With the geographic expansion of the city as the General Plan Growth areas build out, a fifth police beat is planned to be added; however, it is not anticipated to be located within the Plan Area. The existing Police Station and Administration building at Lincoln Avenue and 6<sup>th</sup> Street is sufficiently sized to provide Police service levels through build out of the Plan Area. The Police Department also provides parking enforcement services for the community. With the mixed use and denser nature of the project, the need for permit parking and time parking zones is likely. In the event this occurs, use of new technologies will be utilized to reduce resources needed for enforcement and monitoring.

## 5.11 | PARKS, RECREATION FACILITIES, AND PROGRAMS

Parks and recreational facilities and programs are provided by the City's Community Services Department. The Community Services Department also provides recreation programs to City residents and visitors. Examples of programs include youth sports, adult sports, youth and adult aquatics classes, senior services, youth and adult enrichment programs and various other leisure and recreation opportunities.

The City of Woodland proudly provides more than 394 acres of parks and recreation facilities, including 149 acres of developed parkland and 24 acres of other facilities, including mini neighborhood and community parks, a community sports park, a 50-meter aquatics complex, and six recreational facilities, including the 13-acre Woodland Community & Senior Center. Park sites within proximity to the Plan Area are shown on Exhibit 5-6.



**EXHIBIT 5-6: PUBLIC SERVICES FACILITIES PROXIMITY**

The City’s General Plan establishes a goal of providing 6.0 acres of parks for every 1,000 residents and encourages the distribution of parks such that every residence is within a one-quarter mile of a neighborhood park. Based on average person per household factor, the Specific Plan would result in a build-out population of 4,386 which equates to providing approximately of 26.3 acres of parks, as shown in Table 5.5.

### 5.11.1 Proposed Park and Recreation Facilities

The parks and open space system is a key feature required in order to meet the health, wellness and support of community values envisioned for the Plan Area. The interconnected open space, active and passive recreation facilities will provide ample places for physical activity and provide places for residents to meet, socialize and play. Together, the park and open space amenities provide a full range of active and passive recreation opportunities to help form a unifying element of the community. The land use plan allocates 11.6 acres of park and 6.0 acres of greenbelts. Park and open space acreage calculations are shown in Table 5.6.

<b>Table 5.5 Estimated Park Land Requirements</b>				
<b>Land Use</b>	<b>Estimated D.U.</b>	<b>PPH Factor</b>	<b>Population</b>	<b>Plan Area Park Acres 6 acres*/1000</b>
Low Density	500	3.01	1,505	
Medium Density	600	3.01	1,806	
High Density	500	2.15	1,075	
<b>Total units</b>	<b>1,600</b>		<b>4,386</b>	<b>26.316 acres</b>

Source for Population per household factors is WMC Section 16.48.020.

Parks and open space provided in the Plan Area are shown on Exhibit 5-7 and include the following park classifications:

#### 1. MINI/POCKET PARKS AND PLAZAS

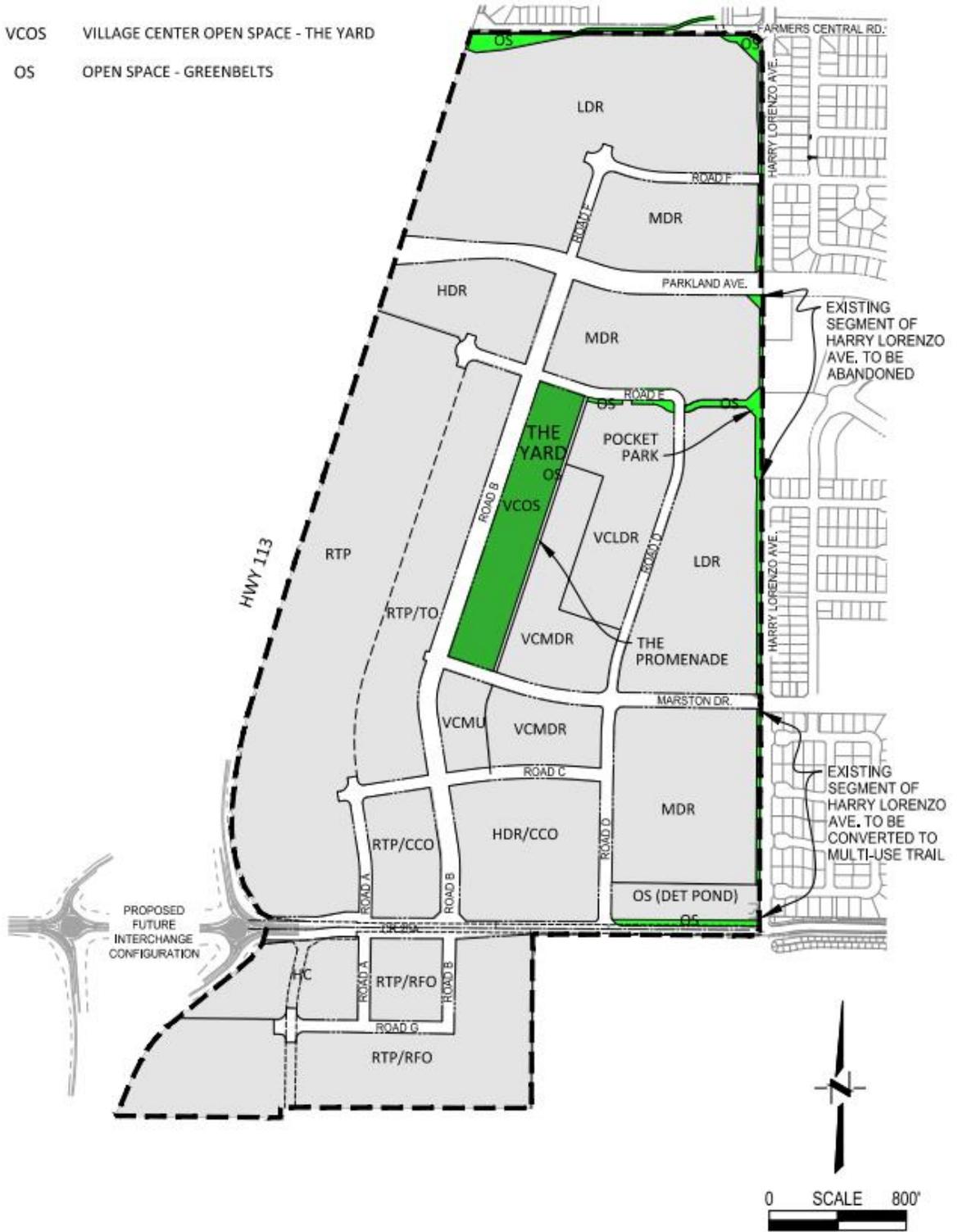
Privately maintained mini/pocket parks, plazas, courtyards and common areas, typically range from 0.1 to 1.0 acres, and serve as amenities within the multi-family developments and within the RTP and commercial zones. A 0.5-acre pocket park, located east of Road E along the HLA greenbelt, will function as a neighborhood amenity, a trailhead and provide a connector between the Plan Area and the adjacent Spring Lake Community Park.

#### 2. NEIGHBORHOOD PARKS

Neighborhood parks provide mostly passive recreation uses, serving neighborhoods within a range of about one-half mile (or a 10-minute walking distance). The 10.8 acre park, named The Yard, is designated as the neighborhood park to serve the Plan Area.

**LEGEND**

- VCOS VILLAGE CENTER OPEN SPACE - THE YARD
- OS OPEN SPACE - GREENBELTS



**EXHIBIT 5-7: PROPOSED PARKS/GREENBELTS**



### **3. GREENBELTS AND MULTI-USE TRAILS/PATHS**

Greenbelts are envisioned as landscaped, open space areas to be used for recreation and non-motorized transportation. Greenbelts may be designed to include playgrounds, open turf or planted areas, shade trees, plazas, picnic areas, and are connected by bike/walking paths. Greenways for the WRTP also provide stormwater management, including drainage and connections to open space areas used for stormwater detention/retention. The Land Plan allocates a total of 6.0 acres of open space for green belts, as shown in Exhibit 5-7. Additionally, the Plan includes 5 miles of multi-use trails and paths that along with the greenbelts and parks, create a network of off-street biking and walking paths.

The greenbelts provide vital pedestrian and non-motorized connectivity within the Plan Area and to the adjacent land uses. The primary greenbelt facilities in the Plan Area are located along Harry Lorenzo Avenue, along the extension of Farmer's Central Road and as a connection from the proposed Spring Lake Central Park to the Plan Area's Central Green.

The greenbelt extending from the Road E/Road D intersection to the Eastern Greenway Connector will be 40 feet wide and have a 10 foot wide shared use path.

#### **Eastern Greenway Connector – Harry Lorenzo Multi-Use Trail**

A greenway along the eastern edge of the Plan Area will serve as a central spine, connecting the Plan Area to the existing Spring Lake development to the east. Located along the western edge of Harry Lorenzo Avenue, the greenway will extend the entire length of the Plan Area between CR 25A and Farmers Central Road. South of Marston Drive, the existing pavement in Harry Lorenzo Ave will be removed and the existing right-of-way will be utilized for the greenway. This facility will be more informal in nature with a 10-foot wide shared use path that gently meanders through landscaped open spaces. Multiple trail connections to Plan Area subdivisions will be provided to connect pedestrian and bicycle traffic to the linear greenway and to/from the adjacent Spring Lake community. Intersections with Marston, Parkland, and Road F will be designed with a distinctive treatment to clearly delineate each crossing.

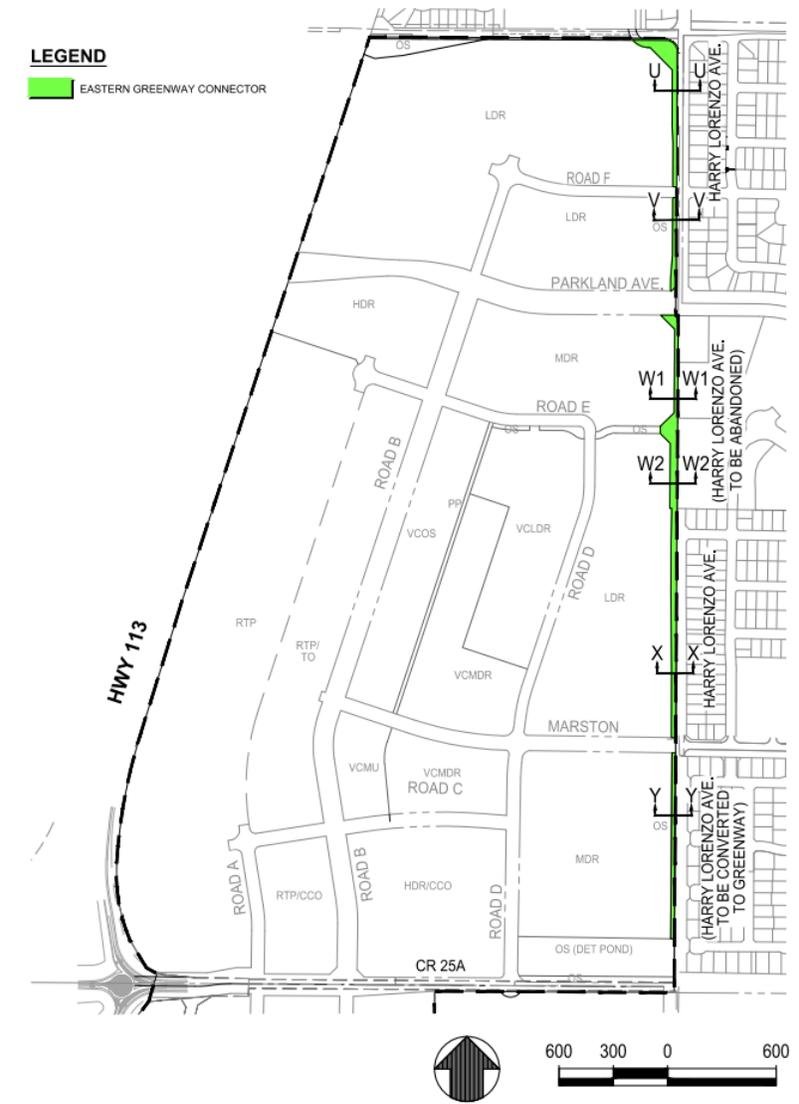
PG&E maintains and operates an existing high-pressure gas transmission main within the corridor. Landscaping within the vicinity of the transmission main shall conform with PG&E planting zone guidelines. The planting zones are identified as the Pipe Safety Zone, the Border Zone, and the Outer Zone. Generally allowable groundcovers, shrubs, and tree sizes for each zone are defined below:

Pipe Safety Zone: Lawns, flowers, low-profile grasses and low-growing herbaceous plants.

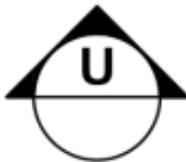
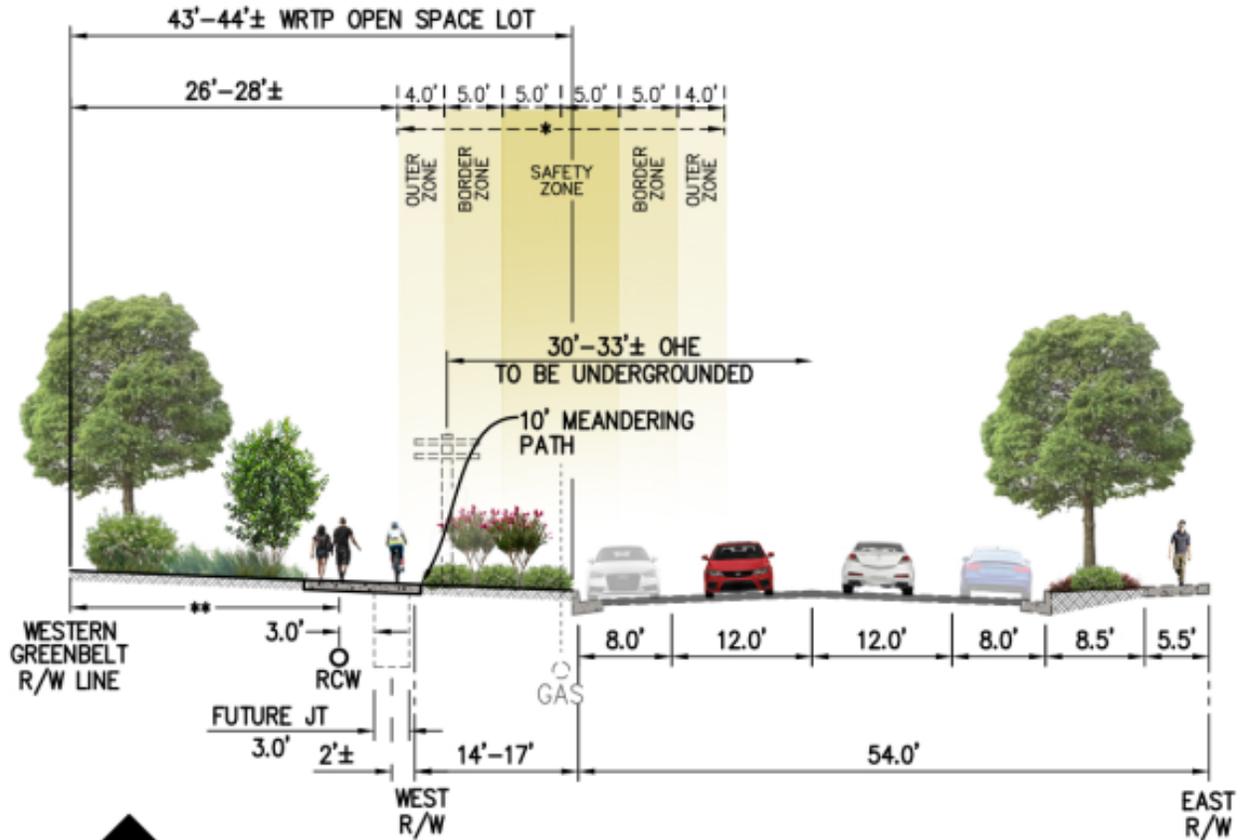
Border Zone: Small to medium shrubs with a trunk or main branch less than 8" in diameter at full maturity, measured at 4.5 feet from the ground.

Outer Zone: Large shrubs and small trees with a trunk less than 36" at full maturity measured at 4.5 feet from the ground.

The relationship of the path location relative to the gas main and the corresponding landscape zones are depicted on the following Sections U-U through Y-Y. The path and greenbelt amenities shall be designed in accordance with the Multi-Use Trail section in Chapter 4.



**EXHIBIT 5-8: EASTERN GREENWAY CONNECTOR**

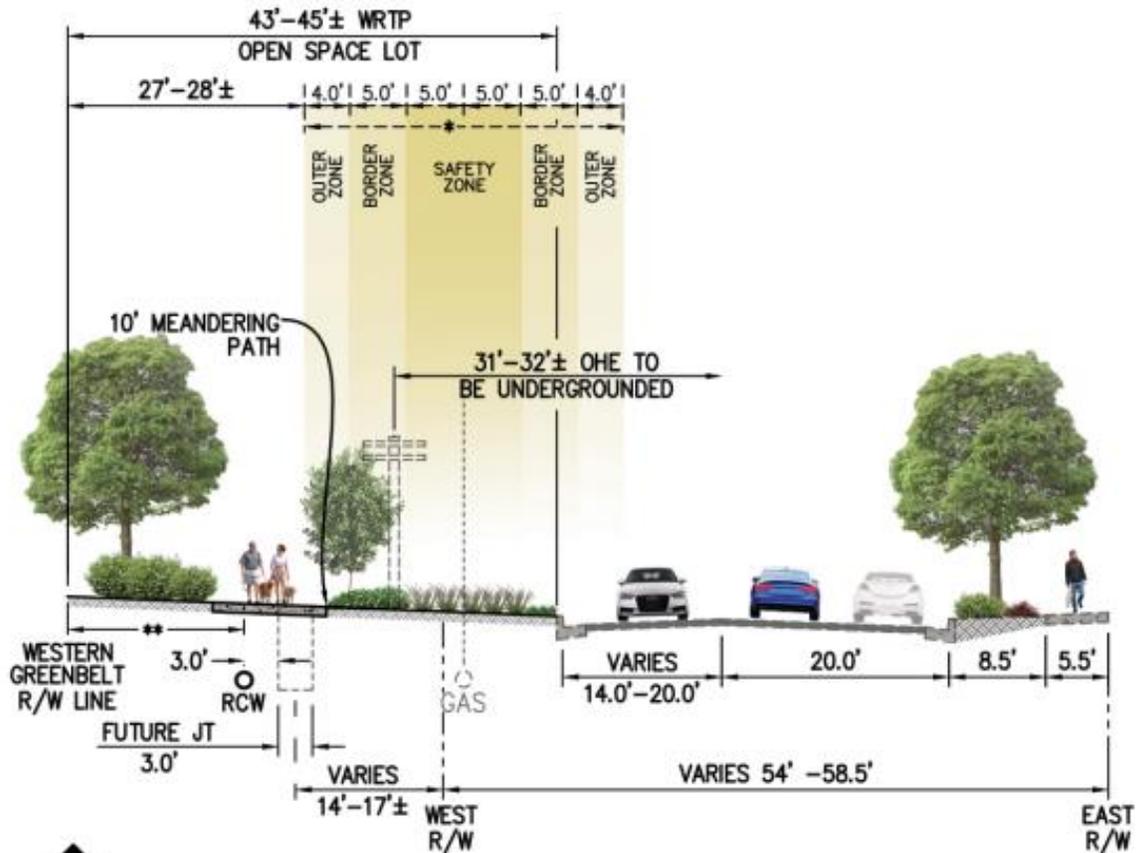


## HARRY LORENZO AVENUE ADJACENT TO HEIDRICK RANCH, PH 2 & 3

- \* PG&E RESTRICTED PLANTING ZONES
- \*\* IT IS THE INTENT OF THE SPECIFIC PLAN TO PROVIDE 22' CLEAR FROM THE WESTERNMOST UTILITY TO THE WESTERN GREENBELT PROPERTY LINE. IF THE JOINT TRENCH IS PLACED WEST OF THE RECYCLED WATER, THEN THE SIZE OF THE GREENBELT SHALL BE INCREASED TO PROVIDE 22' CLEAR DISTANCE.

### LEGEND:

SAFETY ZONE	LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
BORDER ZONE	SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
OUTER ZONE	LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.



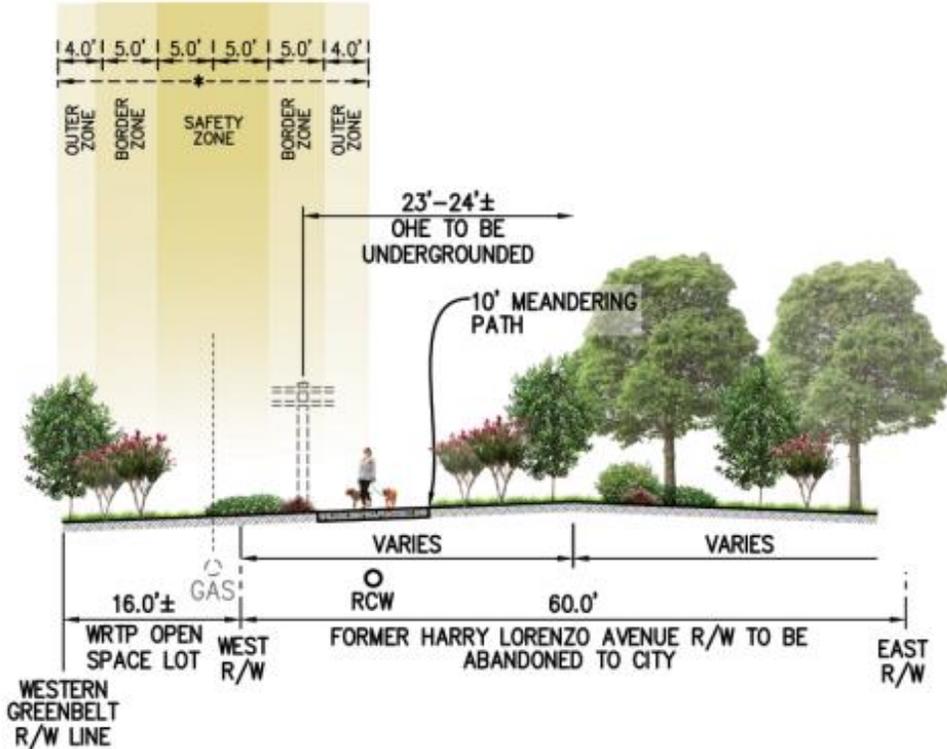
## HARRY LORENZO AVENUE

### ADJACENT TO SPRING LAKE CENTRAL - PHASE 3

- \* PG&E RESTRICTED PLANTING ZONES
- \*\* IT IS THE INTENT OF THE SPECIFIC PLAN TO PROVIDE 22' CLEAR FROM THE WESTERNMOST UTILITY TO THE WESTERN GREENBELT PROPERTY LINE. IF THE JOINT TRENCH IS PLACED WEST OF THE RCW, THEN THE SIZE OF THE GREENBELT SHALL BE INCREASED TO PROVIDE 22' CLEAR DISTANCE.

#### LEGEND:

- SAFETY ZONE** LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
- BORDER ZONE** SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
- OUTER ZONE** LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.



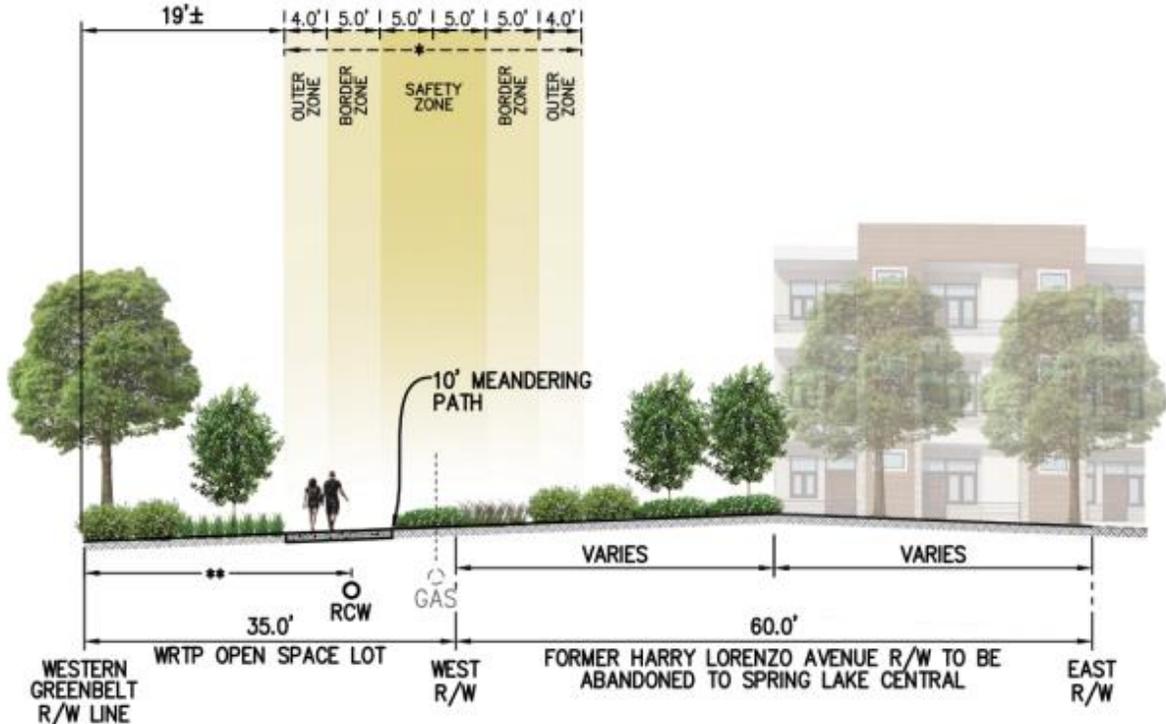
# HARRY LORENZO AVENUE

## ADJACENT TO SPRING LAKE CENTRAL PARK

\* PG&E RESTRICTED PLANTING ZONES

### LEGEND:

- SAFETY ZONE**      LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
- BORDER ZONE**    SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
- OUTER ZONE**      LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.



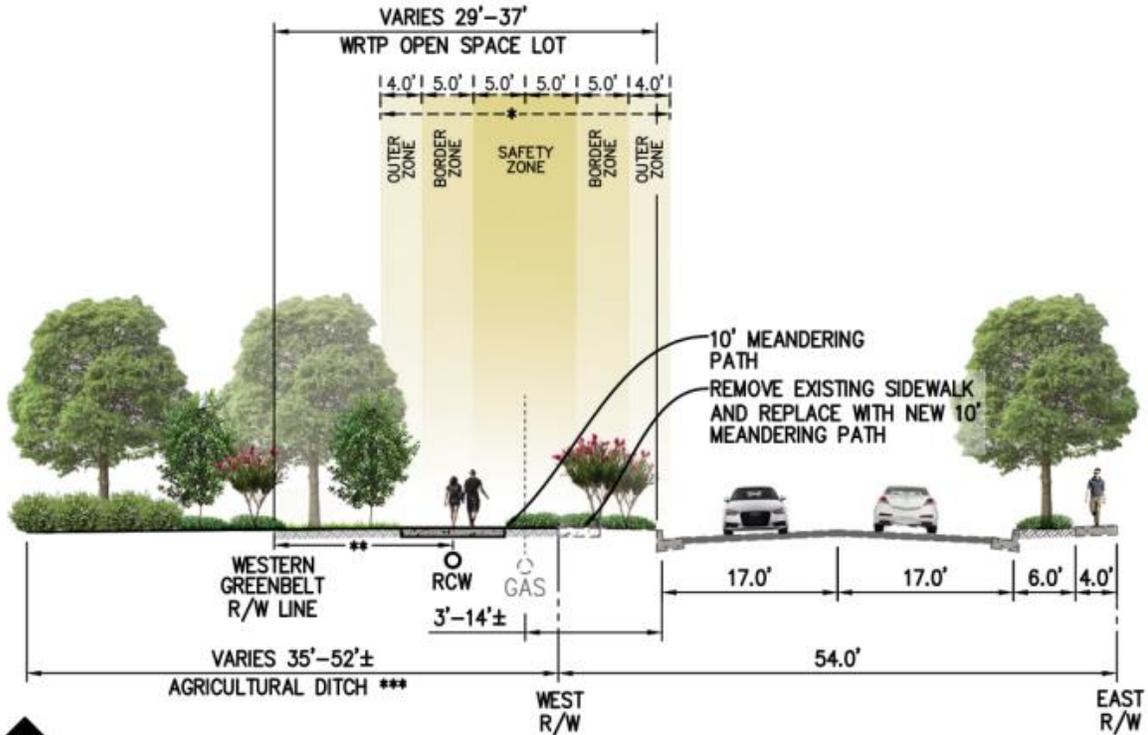
## HARRY LORENZO AVENUE

### ADJACENT TO SPRING LAKE CENTRAL MULTI-FAMILY SITE

- \* PG&E RESTRICTED PLANTING ZONES
- \*\* IF JOINT TRENCH IS EXTENDED IN THE GREENBELT IN THIS CROSS SECTION THEN THE WIDTH OF THE GREENBELT SHALL BE INCREASED TO PROVIDE 25' CLEAR FROM THE WESTERMOST UTILITY TO THE GREENBELT PROPERTY LINE.

#### LEGEND:

SAFETY ZONE	LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
BORDER ZONE	SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
OUTER ZONE	LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.

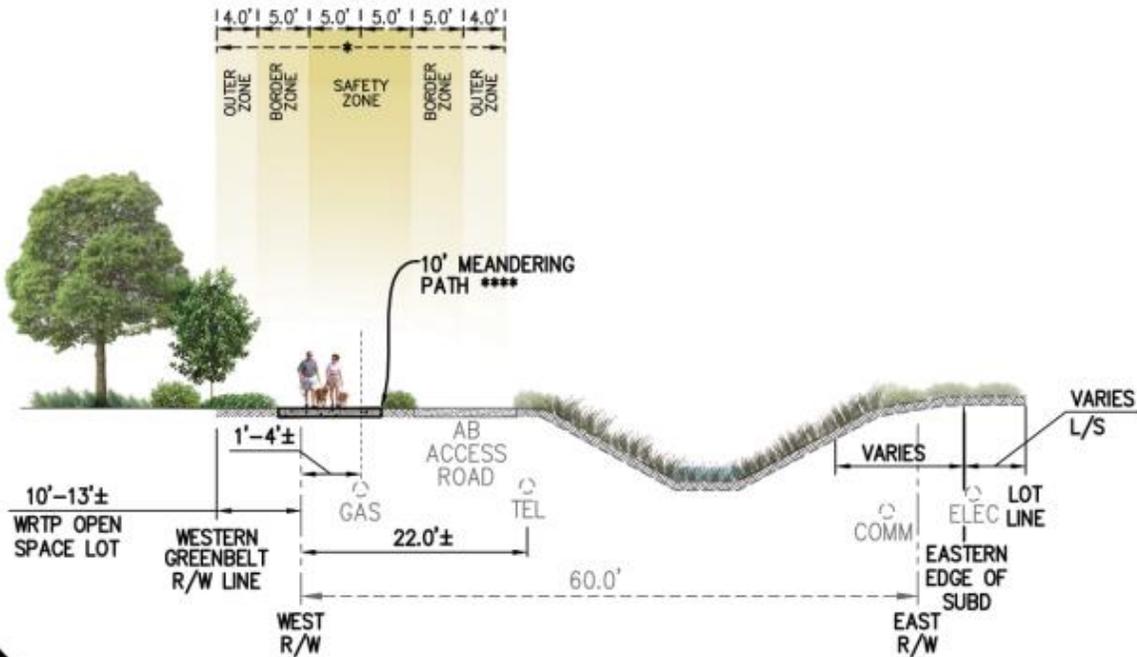


## EX. HARRY LORENZO AVENUE ADJACENT TO SOLARA RANCH

- \* PG&E RESTRICTED PLANTING ZONES
- \*\* IF JOINT TRENCH IS EXTENDED IN THE GREENBELT IN THIS CROSS SECTION THEN THE WIDTH OF THE GREENBELT SHALL BE INCREASED TO PROVIDE 25' CLEAR FROM THE WESTERNMOST UTILITY TO THE GREENBELT PROPERTY LINE.
- \*\*\* WITH CONSTRUCTION OF GREENBELT, DITCH SHALL BE FILLED IN AND STORMWATER TO BE REROUTED OUTSIDE OF GREENBELT.

### LEGEND:

SAFETY ZONE	LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
BORDER ZONE	SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
OUTER ZONE	LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.



## EX. HARRY LORENZO AVENUE ADJACENT TO OYANG SOUTH

- \* PG&E RESTRICTED PLANTING ZONES
- \*\*\* WITH CONSTRUCTION OF GREENBELT, DITCH SHALL BE FILLED IN AND STORMWATER TO BE REROUTED OUTSIDE OF GREENBELT.
- \*\*\*\* PATHWAY SHALL CONNECT TO CUL-DE-SAC PATHWAYS IN OYANG SOUTH.

- NOTES: 1) GREENBELT IMPROVEMENTS EAST OF THE EXISTING WESTERLY R/W WILL BE CONSTRUCTED BY WRTP WITH REIMBURSEMENT FROM SPRING LAKE.  
 2) WRTP OPEN SPACE LOT BASED ON PROVIDING 14' FROM GAS LINE TO WESTERN R/W LINE.

### LEGEND:

SAFETY ZONE	LAWNS, FLOWERS, LOW-PROFILE GRASSES AND LOW-GROWING HERBACEOUS PLANTS.
BORDER ZONE	SMALL TO MEDIUM SHRUBS WITH TRUNKS OR MAIN BRANCH LESS THAN 8" IN DIAMETER AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.
OUTER ZONE	LARGE SHRUBS AND SMALL TREES WITH A TRUNK LESS THAN 36" AT FULL MATURITY. DIAMETER IS MEASURED FOUR AND A HALF FEET FROM THE GROUND.



<b>Table 5.6 Park/Open Space Provided</b>		
Parks	Zone	Acres
Neighborhood Park- The Yard	VCOS	10.8
The Promenade*	VCOS	0.8
<b>SUBTOTAL</b>		<b>11.6</b>
Greenbelts	Zone	Acres
Greenbelts	OS	6.0
<b>SUBTOTAL</b>		<b>6.0</b>
<b>TOTAL PARKS/GREEN BELT ACRES PROVIDED</b>		<b>17.6</b>

\*Designated as Pedestrian Promenade on the Land Use Plan Layout to denote specific location of hardscape. Designated herein as VCOS because it is part of The Yard.

The Specific Plan will meet its remaining park obligation through the payment of project impact fees.

## 5.12 | SCHOOLS

The Woodland Joint Unified School District (WJUSD) provides public education from kindergarten through 12th grade within Woodland, as well as nearby unincorporated areas of Knight's Landing, Yolo, and Zamora. The District includes 11 elementary schools, one charter elementary school, two middle schools, two comprehensive senior high schools for grades 9-12, and one continuation high school. Additionally, there are three alternative education programs, six pre-schools, three infant-toddler programs, and an adult education center.

The Plan Area is located in close proximity to the Woodland Community College, at 2300 East Gibson Road, within the Spring Lake Specific Plan Area. The Community College has been at this location since 1990. The Community College offers associate degrees and continuing education certificates in Agriculture and Agricultural Engineering/Technologies; Advanced Technology, Manufacturing, Clean Economy, Food Production clusters, Business Administration logistics, Culinary Arts, Elementary Education and Health Care.

Table 5.7 shows the estimated number of students to be generated from the Plan Area. The WJUSD will evaluate the attendance boundaries of existing and planned schools in the Plan Area to determine the school locations for Plan Area students. Existing schools in the Plan Area vicinity are Pioneer High School and Spring Lake Elementary School.

WJUSD owns a 20-acre Future School Site located directly south of Pioneer High School, approximately one-half mile from the Plan Area. WJUSD has requested that the Specific Plan identify an alternative site for an elementary school, should it be needed. Up to a 12-acre portion

of the MDR parcel located at the northeast corner of Road B and Road E will be reserved for a potential school site, in accordance with the terms of the development agreement. The primary vehicular access to the school will be on Road E. No vehicular access to the school will be allowed on Parkland Avenue.

<b>Table 5.7 Estimated Student Generation/School Site Demands</b>							
<b>Land Use</b>	<b>Estimated D.U.</b>	<b>K-6 Factor</b>	<b>Total K-6</b>	<b>7-8 Factor</b>	<b>Total 7-8</b>	<b>9-12 Factor</b>	<b>Total 9-12</b>
Singe Family	1,100	0.2233	246	0.0619	68	0.1413	155
Multi Family	500	0.2596	130	0.0711	36	0.1342	67
<b>Total units</b>	<b>1,600</b>						
<b>Total students</b>			<b>376</b>		<b>104</b>		<b>222</b>

Source: Residential and Commercial/Industrial Development School Fee Justification Study for the Woodland Joint Unified School District, by Cooperative Strategies, April 6, 2020

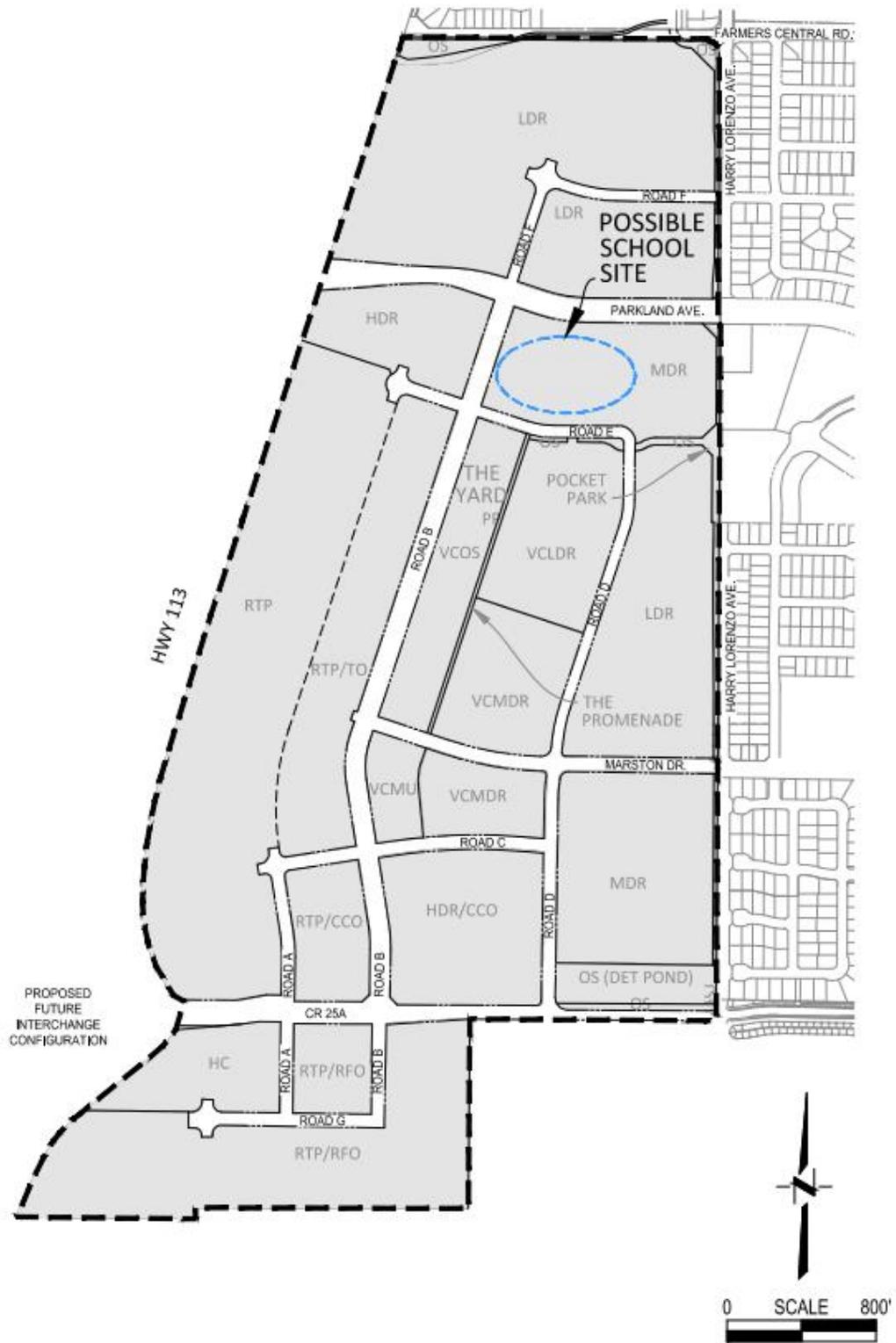


EXHIBIT 5-9: POSSIBLE SCHOOL SITE

## **5.13 | LIBRARY SERVICES**

Library services are provided to the City of Woodland through the Yolo County Library System. The Woodland Public library is in central Woodland at 250 First Street. This facility will provide library access, including expanded virtual programming, youth activities, and e-book check out for Plan Area residents.

## **5.14 | OTHER GOVERNMENT SERVICES**

City governmental services (e.g. planning department, building inspection, public works administration, city manager and city council, etc.) are provided primarily at City Hall at 300 First Street in downtown Woodland. As population increases so do the demands on these general government services. These services are paid for primarily from discretionary funds in the City's general fund and user fees for development related services.

## **5.15 | SOLID WASTE**

Solid waste and yard waste collection and disposal and curbside recycling in Woodland are provided by a franchise agreement with Waste Management, with disposal and material processing at Yolo County Central Landfill. The General Plan policies ensure a consistent, citywide level of service for refuse collection, neighborhood cleanup, sanitization enforcement, and recycling programs. Existing waste disposal facilities are adequate to maintain a sufficient level of service for Specific Plan build out.