

3. Infrastructure and Public Services

3.1 Introduction

3.1 Introduction

The development of the East Area 1 Specific Plan will require the extension of existing infrastructure and services into these new mixed-use neighborhoods. The California Government Code requires a specific plan to include text and diagrams that specify, "The proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the area covered by the plan and needed to support the land uses described in the plan." This section of the Specific Plan helps fulfill this requirement and meets the Santa Paula Municipal Code requirements for preparing specific plans. In addition, this section facilitates orderly development by identifying the "backbone" utility infrastructure needed to support the proposed development.

3.2 Water Supply

3.2.1 Domestic Water Master Plan

3.2.1.1 Existing Conditions

Water supply to the East Area 1 Specific Plan project site is currently supplied by a series of on-site water wells. These wells supply water for both domestic consumption and agricultural irrigation uses. The existing wells have been in service for a long period of time and, for the purposes of future conditions, have run their design life. Existing wells will be utilized for construction water as the site is graded, in accordance with the Specific Plan, and then will be abandoned pursuant to state and local regulations.

3.2.1.2 Domestic Water Demands

In order to estimate water demand for the type and amount of land uses that would be permitted by the proposed Specific Plan, the water demand factors contained in the City's 2005 Urban Water Management Plan were used. Based on these factors, the annual average water demand for the proposed East Area 1 Specific Plan is between approximately 1,174.7 AFY and 1,359.2 AFY. The demand estimates uses a range for domestic demand of 132 and 163 gallons per day per person (see Table 3-1). Of this total, between 866.0 AFY and 1050.5 AFY is potable water demand and 308.7 AFY is non-potable water

demand for irrigation of parks, athletic fields, and agricultural preserves. The City would supply the portions of the project overlying the respective groundwater basins with water from those basins. This will require between 853.6 AFY and 983.5 AFY of groundwater production from the Santa Paula Basin and between 320.7 AFY and 375.3 AFY of groundwater production from the Fillmore Basin.

3.2.1.3 Proposed Well Field System

The City's Potable Water System Master Plan concludes that a new well field is needed in the Santa Paula and Fillmore Groundwater Basins within the East Area 1 Specific Plan area to serve new development in the City of Santa Paula. Figure 3-1 provides a schematic layout of the proposed Domestic Water Well Field Master Plan. A series of five duty wells are planned in the East Area 1 project site. The first well will be located near the east edge of the project site, adjacent to Haun Creek. The other four wells are located near the west edge of the project site, adjacent to Santa Paula Creek. There will also be 5 standby wells constructed adjacent to the duty wells.

3.2.1.4 Proposed Conditions

The proposed Domestic Water Master Plan has two alternatives: a single zone system and a dual zone system as shown in Figures 3-2a and 3-2b. The single zone system for the East Area 1 Specific Plan domestic water system will operate entirely within the City's 200 Zone and will receive water via a proposed 18" distribution main as called for in the City's Potable Water System Master Plan. A temporary 20" distribution main will need to be constructed from Santa Paula Road to the East Area 1 project site. The ultimate 18" distribution main and the temporary 20" distribution main will terminate at the intersection of Hallock Drive and Telegraph Road. This terminus becomes the main point of connection (POC) for the East Area 1 project.

From the POC a new 12" tank fill line will proceed north through the East Area 1 site, terminating at a new 3.0 million gallon (MG) buried concrete reservoir in the foothills north of the planned development area. This new tank will serve as the primary source for domestic consumption in the East Area 1 project. From the proposed tank site a new 400 Zone domestic supply system will be constructed in the East Area 1 development. The proposed distribution system will be comprised of 8" through 12" mains. To anticipate the higher fire flow demands of larger

3. Infrastructure and Public Services

3.2 Water Supply

Table 3-1: Annual Average Water Demand at Buildout

Water Demand at a Demand Rate of 132 gpd per person						
Land Use	Total Units	Area (acres)	Demand Rates ¹	Annual Demand (AFY)	Demand from Santa Paula Basin (AFY)	Demand from Filmore Basin (AFY)
Potable Water Consumption						
Residential ²	1500 units					
Single Family Attached	266 units		132 gpd per person	147.5	95.9	51.6
Single Family Detached	607 units		132 gpd per person	314.1	133.0	181.1
Multifamily	627 units		132 gpd per person	324.5	324.5	0.0
Light Industrial	150,000 sq. ft.		2.49/sq. ft./yr	1.1	1.1	0.0
Commercial	285,000 sq. ft.		15.10g/sq. ft./yr	13.2	13.2	0.0
Civic/Institutional						
Elementary School		10.8	1.81 AFY per acre	19.5	8.7	10.8
High School		8.3	1.81 AFY per acre	15.0	15.0	0.0
Postsecondary Education		11.6	1.81 AFY per acre	21.0	21.0	0
Shared Facilities		5.6	1,81 AFY per acre	10.1	10.1	0
Subtotal Potable Water Demand				866.0	622.5	243.5
Other Water Consumption						
Shared Athletic Fields		23.2	2.22 AFY per acre	51.5	51.5	0.0
Parks/Greenways		65.8	2.22 AFY per acre	146.1	114.5	31.6
Agriculture Preserve (irrigated)		55.0	2.02 AFY per acre ³	111.1	65.5	45.6
Open Space Preserve (not irrigated)		79.4	No water use	0.0	0.0	0.0
Subtotal Other Water Consumption				308.7	231.1	77.2
Total Water Demand				1,174.7	853.6	320.7

Water Demand at a Demand Rate of 163 gpd per person						
Land Use	Total Units	Area (acres)	Demand Rates	Annual Demand (AFY)	Demand from Santa Paula Basin (AFY)	Demand from Filmore Basin (AFY)
Potable Water Consumption						
Residential ²	1500 units					
Single Family Attached	266 units		163 gpd per person	182.1	118.4	63.7
Single Family Detached	607 units		163 gpd per person	387.8	164.2	223.6
Multifamily	627 units		163 gpd per person	400.7	400.7	0.0
Light Industrial	150,000 sq. ft.		2.49/sq. ft./yr	1.1	1.1	0.0
Commercial	285,000 sq. ft.		15.10g/sq. ft./yr	13.2	13.2	0.0
Civic/Institutional						
Elementary School		10.8	1.81 AFY per acre	19.5	8.7	10.8
High School		8.3	1.81 AFY per acre	15.0	15.0	0.0
Postsecondary Education		11.6	1.81 AFY per acre	21.0	21.0	0
Shared Facilities		5.6	1,81 AFY per acre	10.1	10.1	0
Subtotal Potable Water Demand				1,050.5	752.4	298.1
Other Water Consumption						
Shared Athletic Fields		23.2	2.22 AFY per acre	51.5	51.5	0.0
Parks/Greenways		65.8	2.22 AFY per acre	146.1	114.5	31.6
Agriculture Preserve (irrigated)		55.0	2.02 AFY per acre ³	111.1	65.5	45.6
Open Space Preserve (not irrigated)		79.4	No water use	0.0	0.0	0.0
Subtotal Other Water Consumption				308.7	231.1	77.2
Total Water Demand				1,359.2	983.5	375.3

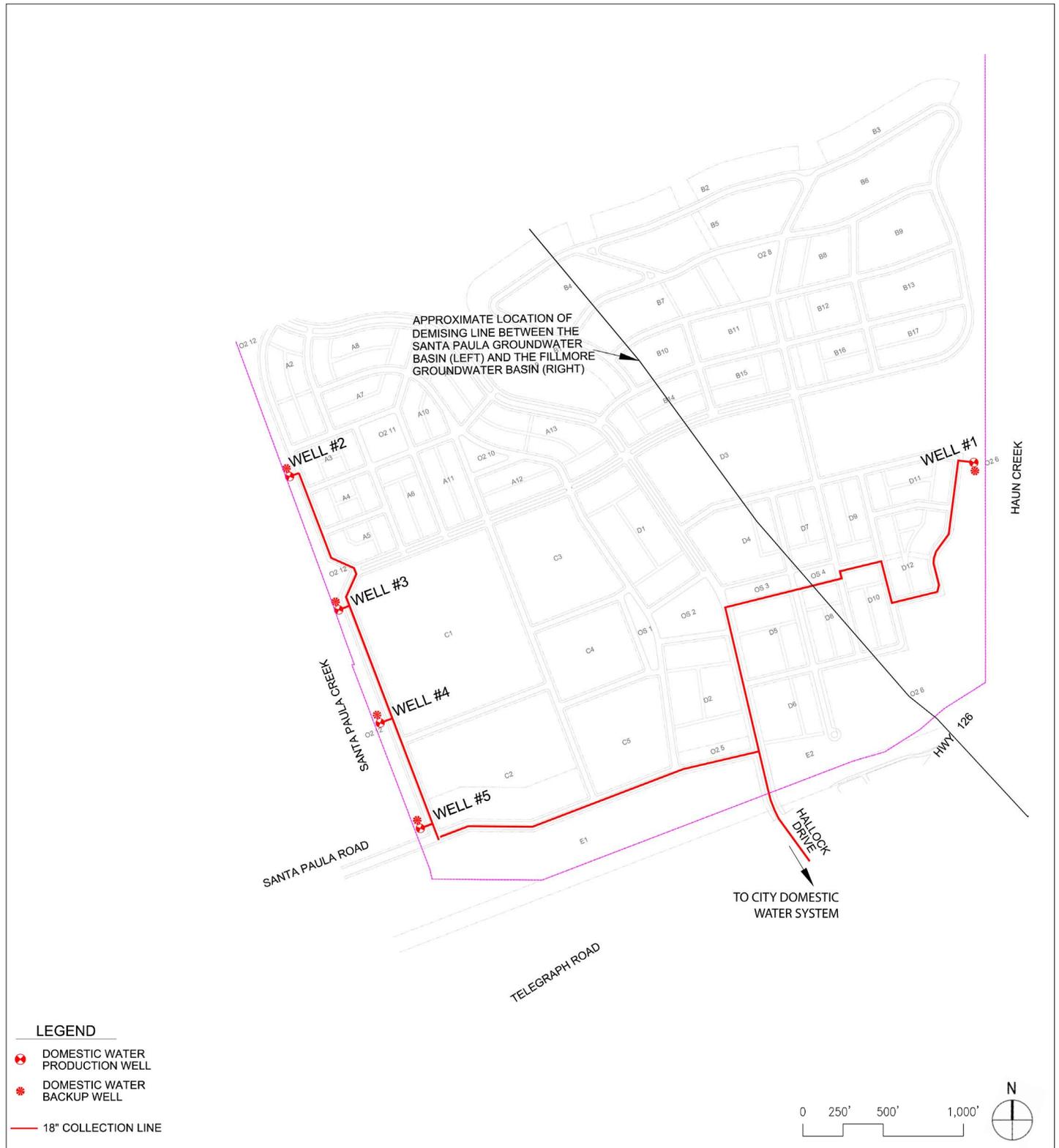
Source: Impact Sciences, 2007.

- Demand rates per 2005 Urban Water Master Plan, 2006 and utilize 132 gallons per day (gpd) per person..
- Demand is estimated at 3.75 residents per dwelling for Single Family Attached units, and 3.50 residents per dwelling in both Single Family Detached and Multifamily units.
- Estimate of water demand for agricultural uses is based on actual use over last five years required to irrigated 336 acres of land under production (816.3 AFY/ 405 acres = 2.02 AFY per acre)

3. Infrastructure and Public Services

3.2 Water Supply

Figure 3-1: Water Well Field Schematic Layout



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.2 Water Supply

Figure 3-2A: Domestic Water Schematic Layout (Single Zone)



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.2 Water Supply

Figure 3-2B: Domestic Water Schematic Layout (Dual Zone)



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.2 Water Supply

school and commercial facilities, the water distribution system in and around the commercial zoned areas will be comprised of 10" and 12" mains.

A dual system with an additional 2 MG tank is also designed for the project, as illustrated in Figure 3-2b. This system creates two zones, and benefits adjacent communities outside East Area 1. One zone is located at the northeast side of the project, and the second is the remainder with respect to the elevation difference.

3.2.2 Recycled Water Plan

3.2.2.1 Existing Conditions

Currently there are no recycled water systems in the East Area 1 project vicinity. Agricultural irrigation needs are currently met by the on-site well system.

3.2.2.2 Proposed Conditions

The proposed Recycled Water Plan is shown on Figure 3-3. The East Area 1 recycled water system would operate via a proposed 12" distribution main as called for in the City's Recycled Water Plan. This 12" distribution main will be available for service after the City's water recycling plant is operational. The 12" distribution main will terminate at the intersection of Hallock Drive and Telegraph Road, within the City limits after annexation of the Specific Plan area. This terminus becomes the main point of connection (POC) for the East Area 1 project. Should the East Area 1 project precede the City's water recycling plant, temporary cross connections between the proposed East Area 1 domestic water distribution system and the proposed East Area 1 recycled water distribution system will be required.

From the POC a new recycled water system will proceed north into the East Area 1 Specific Plan site. The proposed distribution system will be comprised of 6" through 10" mains. To anticipate the higher irrigation flow demands of larger school and open space areas, the recycled water distribution system in and around the commercially zoned areas will be comprised of 6" mains with a system of 8" and 10" mains stemming from the POC of the City's recycled water system. Anticipated demand for recycled water in the East Area 1 project is estimated at 98 acre feet per year.

According to the City's Potable Water System Master Plan the City will in the future develop a recycled water system

conveyance plan that will include a line in Telegraph Road, delivering recycled water to a point of connection (POC) near the intersection of Hallock Drive and the VCTC railroad right-of-way. The East Area 1 project includes a 10" stub-out for future connection to the City's system.

The project does include, as described in the East Area 1 Recycled Water Plan, an onsite recycled water distribution system to irrigate open space, greenbelt, and park areas. This will allow East Area 1 to make use of recycled water when the City completes its planned recycled water plan and extends a line to the POC in Telegraph Road. Approximately 197.6 AFY of recycled water would be used to irrigate the shared athletic fields, open space, greenbelt, and park areas proposed. An additional 111.1 AFY of water would be used to irrigate the agricultural preserve. This would result in a total recycled water use of 308.7 AFY.

3.2.3 Water Quality Plan

3.2.3.1 Existing Conditions

Most of the East Area 1 project site is currently in agriculture use. Consequently, there are no water quality devices. However, the existing land is pervious, and as such, the vadose zone acts as a water quality filtration system to cleanse run-off from pollutants.

3.2.3.2 Proposed Conditions

Several detention basins are depicted in the Water Quality Exhibit Figure 3-4. These detention basins will serve dual roles of flood protection and water quality enhancement. Flood protection is discussed in the drainage section below. The water quality characteristics of these detention basins are outlined herein.

The detention basins will be sized to treat 10% of the Q_{50} (50 year storm event) emanating from the storm drain system as outlined in the Ventura County's Stormwater Quality Urban Impact Mitigation Plan (SQUIMP) guidelines. The detention basins will be developed in such a manner that the sides will be tiered, allowing for various plant species to grow on the several tiers. As stormwater flows increase, successive tiers will be inundated with stormwater, reducing the flow rate through the basin and allowing contact time with the plant species. The outlet structure of the detention basin will permit flows

3. Infrastructure and Public Services

3.2 Water Supply

Figure 3-3: Recycled Water Schematic Layout



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.2 Water Supply

Figure 3-4: Water Quality Plan



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.3 Wastewater Disposal

to enter Santa Paula Creek or Haun Creek. By reducing the outlet structure size and “choking” the outlet flows, contact time within the detention basin can be maximized allowing for sediment and pollutant drop out.

3.3 Wastewater Disposal

3.3.1 Sanitary Sewer Master Plan

3.3.1.1 Existing Conditions

The existing sewer system in the East Area 1 Specific Plan area is minimal. The nearest potential sewer system point of connection is an 8” line located near the intersection of Hallock Drive and Telegraph Road. The City’s “Wastewater System Master Plan”, prepared by Boyle Engineering, addresses the lack of facilities for the East Area 1 project and proposes solutions to accommodate the wastewater flows from the project.

3.3.1.2 Proposed Conditions

The City’s “Wastewater System Master Plan” identifies several off-site mainline capacity deficiencies that will need to be addressed prior to implementation of the East Area 1 Specific Plan. The main collector in Harvard Boulevard has been identified as being in poor condition, some segments are currently over capacity, and the segment from Teague Park easterly to 12th Street does not currently have the capacity to handle loads from East Area 1. This reach has been identified as a major capital project for the City with a topmost priority. Additionally, this reach, along with a proposed extension of this reach northeasterly in Harvard Boulevard and easterly in Telegraph Road, has been identified as the source for future sewer capacity for East Area 1. These improvements would bring the point of connection (POC) for sewer service of East Area 1 to the intersection of Hallock Drive and Telegraph Road.

Table 3-2: Wastewater Generation

	Total Daily Demand (MGD) ¹
Residential	0.46
Commercial	0.02
Institutional	0.05
Total	0.53

¹ MGD - million gallons per day.

Source: Sanitary Sewer Technical Report, Huitt-Zollars, Inc. April 2007.

Wastewater generation for the East Area 1 Specific Plan at buildout is estimated at approximately 0.53 million gallons per day (MGD). This is assuming that approximately 80% of estimated water demand is returned as wastewater. See Table 3-2. The Sewer System Master Plan for the East Area 1 Specific Plan is shown in Figure 3-5.

3.4 Storm Drainage and Grading

3.4.1 Grading Master Plan

3.4.1.1 Existing Conditions

The East Area 1 project site encompasses approximately 501 acres of land adjacent to the eastern edge of the City of Santa Paula. The 501 acre site is generally bounded on the south by the existing VCTC railroad right of way, on the north by the foothills of the Topa Topa Mountain Range, Haun Creek on the east, and Santa Paula Creek on the west. The site is varied in land gradient with a low point in the southeast corner at an elevation of 300’ and a high point in the northern portions of the site with an elevation of 785’. This constitutes a total site elevation change of almost 500 feet.

When analyzing the site, three separate, distinct land gradient “plates” are apparent. First, the “lower plate” encompasses the lower half of the site plus a portion of the site along Santa Paula Creek. There is currently a land gradient of approximately 2% with an elevation range of 300’ in the southeast portion and an elevation of 415’ in the northwest portion of the site adjacent to Santa Paula Creek. This area is currently in use as agriculture fields, densely covered with trees that produce both avocado and citrus.

Second, the “middle plate” encompasses the northeast third of the site, which is currently at a land gradient of approximately 7% with an elevation range of 335’ in the southern portion and an elevation of 475’ in the northern portion. This area is also currently in use as agriculture fields, densely covered with trees that produce both avocado and citrus.

Lastly, the “upper plate” encompasses the remaining northern portion of the site. It is at an existing land gradient in excess of 25% and represents the foothills of the Topa Topa Mountains. Elevations range from 475’ to 785’ in this portion of the site. Minor agriculture use exists in this upper area with trees producing both avocado and citrus laid out in rows following

3. Infrastructure and Public Services

3.3 Wastewater Disposal

Figure 3-5: Sewer System Schematic Layout



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

the contours of the foothills. The site has several paved and unpaved roads traversing the land, a few scattered agriculture outbuildings, both earthen and concrete man-made drainage devices, and a few residential structures on the southerly portion of the site.

3.4.1.2 Proposed Conditions

The proposed Grading Master Plan (Figure 3-6) incorporates the lower plate and middle plate outlined above into the development areas for the East Area 1 development while leaving the steeper upper plate area ungraded. The Grading Master Plan contemplates grading the lower plate of the site to roughly approximate the existing 2% land gradient, thus yielding roadways and blocks in the lower areas of generally within the 0.5% to 2% range. Elevations will remain unchanged with minor variations to account for shrinkage of the soils and warping of drainage surfaces. Cuts and fills will be in the magnitude of 6' in the lower plate, predominantly due to over excavation and recompaction for mitigation of the soils.

In the middle plate, the existing 7% gradient is too steep for most types of building programs, so some of the land will be terraced to incorporate flatter 1% buildable areas separated by sculpted 2:1 slopes in-between. The terracing of the land will occur in the four northernmost blocks as shown on the regulating plan (Figure 5-1). Cuts and fills will be in the magnitude of 30' in the middle plate to form the land into the aforementioned terraces. Roadway grades in the middle plate will vary between 2% and 8% with some limited roadway reaches approaching a 10% grade. The Specific Plan will require an estimated 0.7 million cubic yards (CY) of mass grading and 1.5 million CY of remedial grading, for a total 2.2 million CY of grading.

3.4.2 Drainage Master Plan

3.4.2.1 Existing Conditions

Most of the East Area 1 Specific Plan site is currently in agricultural use. The existing gradients of the land are such that the area is divided up into three major separate drainage sub-areas. These areas are described in the following text and comprise a total drainage area of over 2,600 acres.

3.4.2.1 Orcutt Canyon Creek Drainage

The area referred to as Orcutt Canyon Creek Drainage is

comprised of approximately 2,067 acres and is the largest drainage area associated with the East Area 1 property. The Orcutt Canyon Creek Drainage area is shown in Figure 3-7. The drainage area is linear and situated in a north-south direction with Orcutt Canyon Creek, a natural creek, which is the major flow conveyance device. The Orcutt Canyon Creek Drainage is roughly 1 mile wide and over 4.5 miles long, stretching well up into the Topa Topa foothills and mountains. The elevation varies from 4,600 feet at the northern end of the drainage area to an elevation of 300 feet at the Highway 126 / Haun Creek Bridge. The entirety of the Orcutt Canyon Drainage flows through the East Area 1 project site and exits the project underneath Highway 126 through an existing bridge structure. It eventually terminates at the confluence with the Santa Clara River, some 4,000 feet southerly of the highway bridge. Of the 501-acre East Area 1 project area, roughly the northeast 50 acres is tributary to Orcutt Canyon Creek drainage area with an additional 2,017 acres being off-site drainage.

3.4.2.2 Farm Creek Drainage

The area referred to as Farm Creek Drainage is comprised of over 435 acres and is the second largest drainage area associated with the East Area 1 project. Of the 435 acres, roughly 340 acres are in the East Area 1 project site. The remaining 95 acres is off-site drainage. The Farm Creek Drainage can be seen in Figure 3-7. The Farm Creek drainage area is trapezoidal in shape and stretches into the foothills of the Topa Topa mountains, with an upper elevation of 980 feet to a low elevation of 300 feet at Highway 126. The Farm Creek Drainage has several natural and man-made drainage devices that comprise the primary flow paths. As agriculture progressed through the years, concrete drainage ditches were installed throughout the orchard areas to better direct the flows and control damage caused by unabated flows. These concrete ditches are still in use today. The system of natural drainage courses in the foothills and the man-made concrete ditches in the orchard areas combine and form a shallow rip rap reinforced channel near the southern edge of the East Area 1 project site. This channel exits the site via a 48" culvert under Highway 126, roughly 600 feet west of the Orcutt Canyon Creek/Haun Creek crossing, and flows parallel to Orcutt Canyon Creek for approximately 2,000 feet before confluencing with Orcutt Canyon Creek. Eventually, the flows from Farm Creek Drainage make their way into the Santa Clara River.

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

Figure 3-6: Conceptual Grading Plan

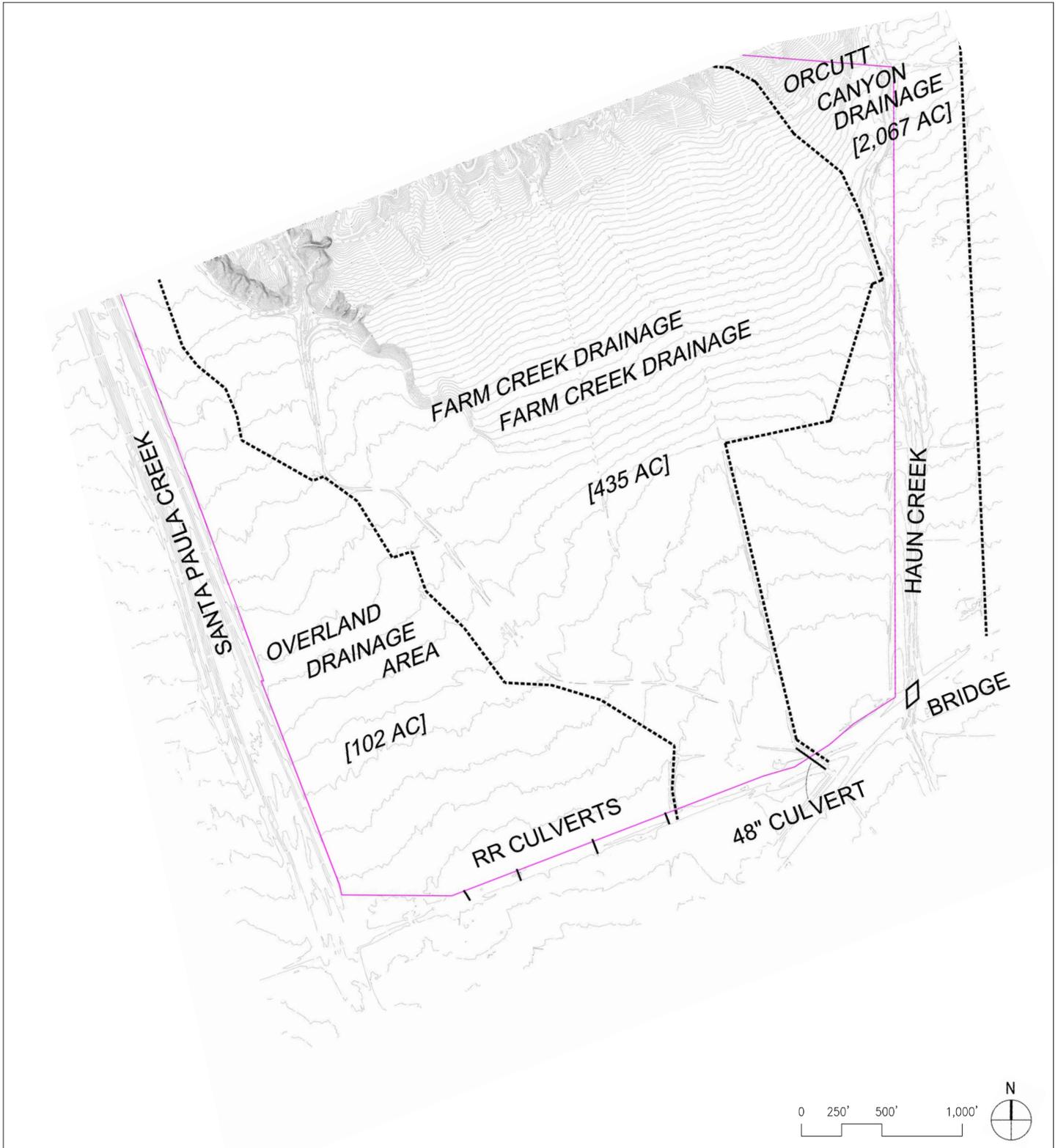


Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

Figure 3-7: Existing Drainage Areas



Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

3.4.2.3 Overland Drainage

The area defined as Overland Drainage is comprised of over 100 acres and is the smallest of the three major drainage areas associated with the East Area 1 project. The Overland Drainage can be seen in Figure 3-7. The Overland Drainage is roughly triangular in shape and is wholly contained in the East Area 1 project site. The Overland Drainage is bounded by Santa Paula Creek to the west and the existing VCTC railroad to the south. The VCTC railroad sits atop a berm that varies from at grade to 5 feet tall. Four existing culverts cross under the VCTC railroad and convey unabated onto private property between the VCTC railroad and Telegraph Road. Site reconnaissance of this property shows no drainage devices to control this flow. Presumably, this flow continues southerly to the Santa Clara River, although no defined drainage paths or devices are evident.

3.4.2.4 Santa Paula Creek Drainage

While not noted in the exhibits, field reconnaissance of the site by Huitt-Zollars, Inc in 2007 showed several field inlets on the East Area 1 site immediately adjacent to the Santa Paula Creek boundary. Review of the site and of topography prepared for the East Area 1 project show no significant amount of drainage area associated with these inlets. They are presumed to allow only localized nuisance flows to enter and flow into Santa Paula Creek.

3.4.3 Proposed Conditions

As a basis for design, the East Area 1 project is designed to meet or exceed the storm drainage requirements of the US Army Corps of Engineers (Santa Paula Creek), Ventura County Watershed Protection District (Orcutt Canyon Creek/Haun Creek), and the City of Santa Paula (on-site drainage systems) where applicable. The Drainage Master Plan for East Area 1 is illustrated in Figure 3-8.

Almost all of the Haun Creek watershed lies to the north of East Area 1 in the Topa Topa foothills and mountains, delivering high-velocity flow to East Area 1. Low flows will remain in a naturalized creek channel, while high storm flows will be diverted into detention basins by weir structures. The northerly weir is a low dam built parallel along the stream bank to divert a portion of the creek's flow. Once through the initial weir the storm flows migrate within a trapezoidal channel, then over

another weir structure into the engineered detention basins. Both weirs are broad-crested and made of reinforced PCC, armorflex, or other permanent hard surfaces. Once in the detention basins the storm flows are held over time to allow siltation to drop out and eventually the cleansed storm flows are drained through a storm drain pipe back into Haun Creek (see Figure 3-9).

There are many tributary flows north of our site from the Topa Topa foothills and mountains. Debris basins north of Planning Areas A and B are proposed to capture these flows. These debris basins have trash grates at the low point to remove large objects and ultimately convey these cleansed storm flows into a storm drain pipe to the underground storm drain system within our site.

3.4.3.1 Orcutt Canyon Creek Drainage Area and Farm Creek Drainage

The Orcutt Canyon Drainage and the Farm Creek Drainage will be combined into a single drainage area by the proposed design. The Orcutt Canyon Drainage area will remain unchanged for the upstream, off-site areas, while the portions of the site immediately adjacent to Orcutt Canyon Creek/Haun Creek, drainage patterns will be modified by the proposed grading.

Flows from these drainages will be conveyed by storm drains in public streets or public drainage easements to the two detention basins, totaling 21.6 acres, along the west edge of Haun Creek. These will significantly reduce the potential for flooding at the Haun Creek/Highway 126 bridge crossing by storing peak flows and delaying their release until after the storm peak. Runoff will meander through the detention basins and eventually spill into Haun Creek at several discharge points.

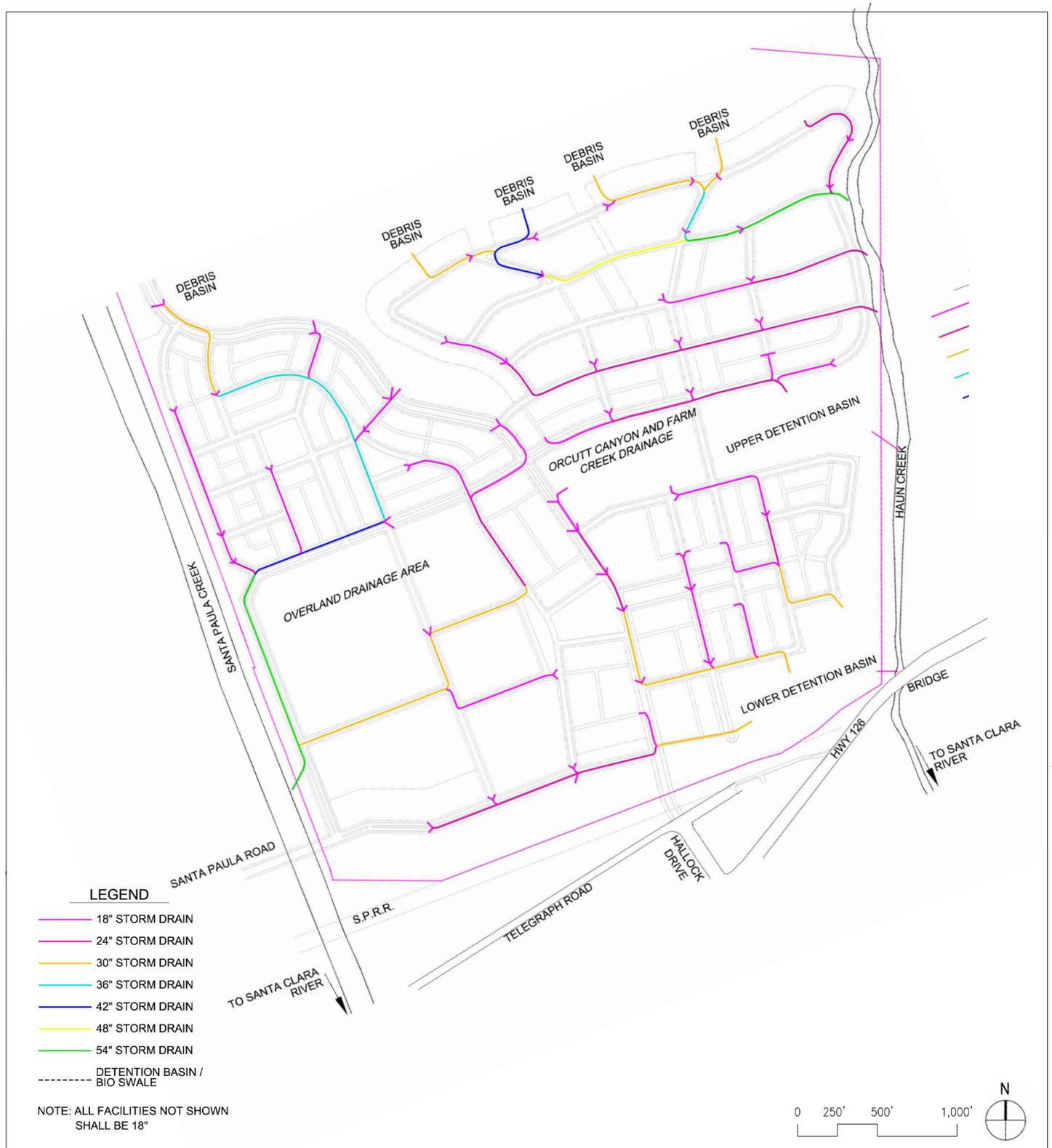
To alleviate existing flooding potential at the Haun Creek/Hwy 126 Bridge, two local detention basins will be created along the western bank of Haun Creek. These detention basins will serve dual roles of flood protection and water quality. The detention basins will accept runoff through a series of storm drain systems located in the public streets or public easements. These storm drain facilities will collect runoff and convey the runoff to a discharge point at the upstream end of the detention basin.

These detention basins will significantly reduce potential for flooding at the Haun Creek/Highway 126 bridge crossing by

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

Figure 3-8: Drainage Master Plan

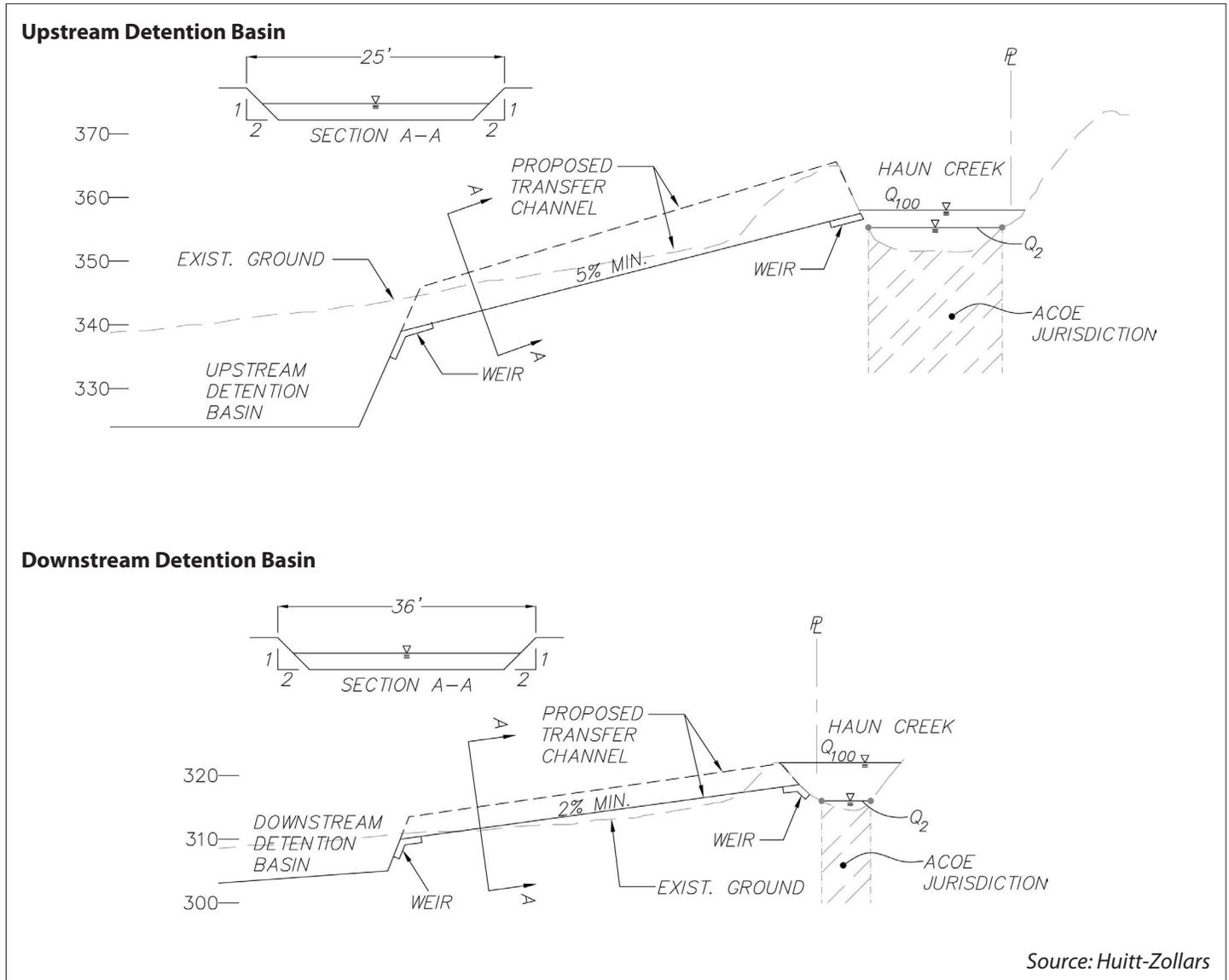


Source: Huitt-Zollars, Inc. 2007.

3. Infrastructure and Public Services

3.4 Storm Drainage and Grading

Figure 3-9: Proposed Weir Structures



3. Infrastructure and Public Services

3.5 Schools

storing the peak event flows and lagging their release after the storm peak. In order to accomplish this design, 21.6 acres of land within the Specific Plan boundary has been set aside for detention basins. Total detention of flows from the Orcutt Canyon drainage and Specific Plan area has been determined by Huitt-Zollars, Inc. to be 112.5 acre-feet. The storm drain systems for the combined Orcutt Canyon Creek and Farm Creek drainage areas are shown in Figure 3-8.

3.4.3.2 Overland Drainage Area and Santa Paula Creek

The existing Overland Drainage area deposits unabated storm flows onto private property. To alleviate this situation, the ultimate land gradient will be reversed, causing flows to terminate within the western edge of the East Area 1 project. Several local storm drain systems, designed to current Ventura Watershed Protection District standards, will convey the flows in the Overland Drainage area to several outfalls along the edge of Santa Paula Creek. Flows exiting from the local storm drains will be allowed to enter a series of linear water quality basins along the western edge of East Area 1 before exiting the site and entering Santa Paula Creek. These linear water quality basins are provided to aid in cleaning storm water runoff before entering Santa Paula Creek. By storing and lagging the flows in the detention basins the peak flows in the Santa Paula Creek/ Highway 126 crossing will remain essentially unchanged. The storm drain systems for the Overland Drainage Area are shown in Figure 3-8.

3.5 Schools

The East Area 1 Specific Plan includes sites for primary, secondary and postsecondary educational facilities. The Haun Creek Neighborhood provides an approximately 10.8-acre Elementary School site that is centrally located within the Specific Plan area so that it is easily accessible and functions as an integral part of the urban core. In addition, the Civic District provides approximately 48.7 acres (not including streets and parks) for a High School and postsecondary educational facility with shared use facilities, such as a library and auditorium, and shared athletic fields. Refer to Table 2-1 for a detailed breakdown.

3.6 Emergency Services

3.6.1 Fire Protection Services

Fire Protection Services for the project will be provided by the Santa Paula City Fire Department (SPFD). The SPFD provides the City with fire prevention, rescue, and basic emergency medical services; hazardous materials mitigation; and disaster planning coordination. The SPFD also provides emergency response into districts outside the City limits, pursuant to its automatic and mutual aid agreements with the Ventura County Fire Department.

The Santa Paula Fire Department has two fire stations located on the East and West sides of town. Fire Station 81 is located on the Eastside at 114 S. 10th Street. Fire Station 82 is located on the Westside at 536 W. Main Street (refer to Figure 3-10). Fire Station 81 is staffed 24 hours a day with (3) three full-time firefighters, while Station 82 is staffed with a combination of (1) full-time captain supervising (2) two full-time firefighters.

The majority of the East Area 1 Specific Plan area is designated in the “low-range area” of the Fire Hazard Zones. However, the northernmost portion of the Specific Plan area is designated as a “High Fire Hazard” area. This area is comprised of steep terrain and will be retained as irrigated avocado fields, thus reducing the fire hazard of this area.

The City’s goal is to keep the Fire Department’s response time to five minutes or less. The closest fire station to the East Area 1 Specific Plan site is Fire Station #81, with an average fire suppression response time of 4.21 minutes.

A 2-acre parcel will be reserved, in accordance with Government Code §§ 66479 et seq., within the Railroad District, at a location acceptable to the City, for a fire station and/or police substation. In addition to reserving the acreage, the Developer must pay the City’s Fire Suppression Facilities Fee.

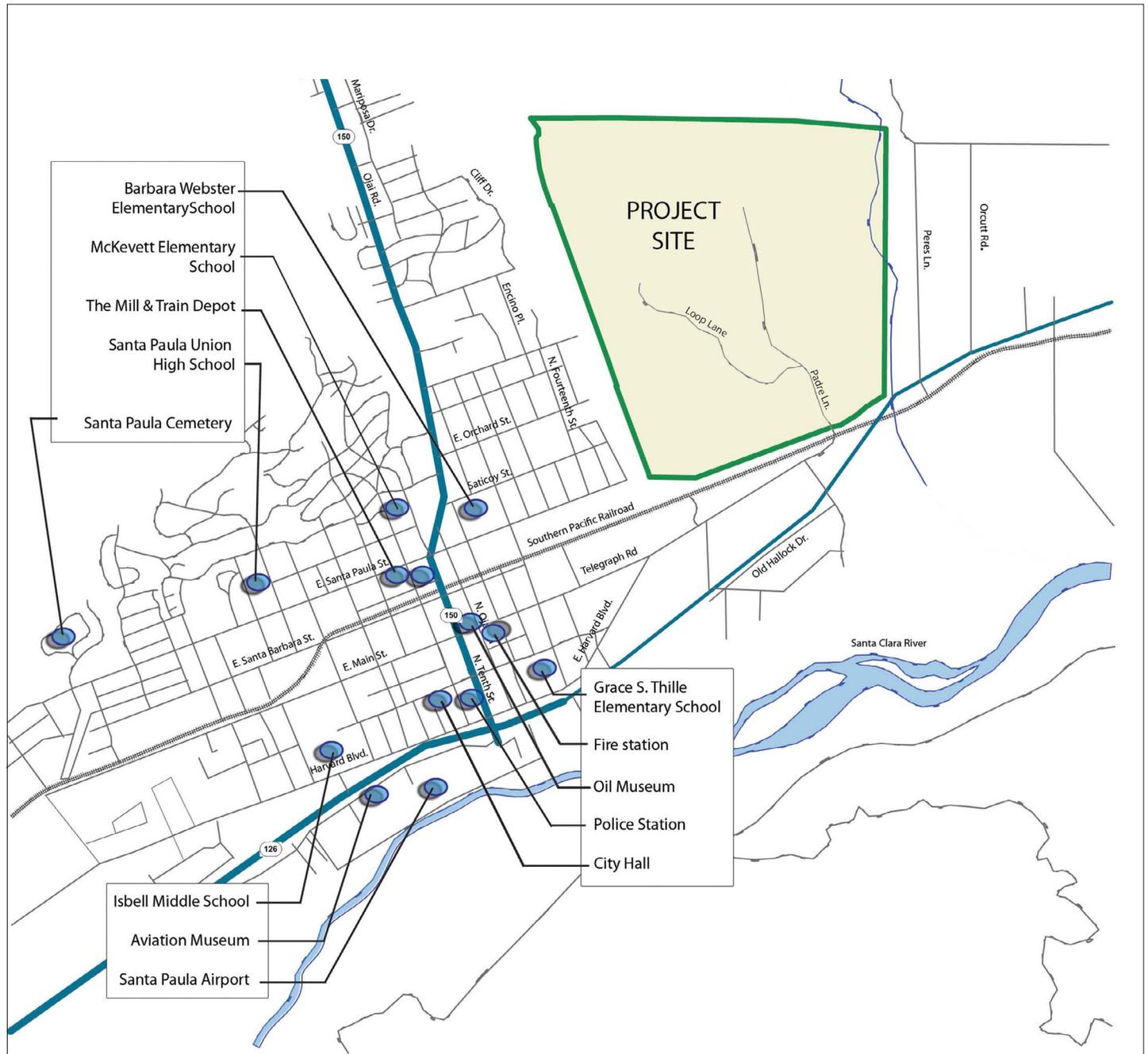
3.6.2 Police Services

The project would be served by the Santa Paula Police Department (SPPD), which currently operates out of a 4,728 square foot facility on 10th Street and the 650 square foot Las Piedras Park Community Policing Building (refer to Figure 3-10).

3. Infrastructure and Public Services

3.6 Emergency Services

Figure 3-10: Public Services and Civic Uses



Source: HDR Town Planning.

3. Infrastructure and Public Services

3.7 Solid Waste

A 2-acre parcel will be reserved, in accordance with Government Code §§ 66479 et seq., within the Railroad District, at a location acceptable to the City, for a fire station and/or police substation.

3.7 Solid Waste

The City of Santa Paula is serviced by the Ventura Regional Sanitation District (VRSD) through the Toland Road Landfill site, located at 3500 N. Toland Road, east of the City. The landfill has a permitted capacity of 30 million cubic yards of solid waste, and currently accepts approximately 1,500 tons per day. At the current rate, it is estimated that the facility will be at capacity and will close in May of 2027.

Solid waste pickup is coordinated by the City, which performs its own pickups for all single-family residential development in the City. Waste pickup for multi-family developments is provided by one of two commercial solid waste and recycling haulers, Consolidated Disposal Services and E.J. Harrison and Sons.

The City also participates in a curbside recycling program, which includes the recycling of glass (food and beverage containers), metal (aluminum cans, etc.) and plastic. The City also provides curbside pickup of paper, cardboard, and yard trimmings, as well as community drop-off events for residents to dispose of large items, household hazardous waste, and motor oil and filters.

The East Area 1 Specific Plan includes policies that support recycling to reduce the amount of solid waste sent to the landfill. Waste carts for household trash, recycling, and green waste will be provided at each residence constructed.

The proposed street network and street types provide multiple routes for collection vehicles to access the various blocks, buildings and uses in the plan area. In addition to street access, many blocks feature alley access as both an alternative route and as a collection point that is not in conflict with on-street parking. Accordingly, each street type anticipates and accommodates such service needs through its sectional configuration and performance characteristics (e.g., curb radii, intersection spacing, and paved width).

3.8 Infrastructure and Public Services

Public services and infrastructure are provided in the City of Santa Paula by both public and private utility companies through a number of special districts, and by the County of Ventura. Inadequate or insufficient infrastructure is a major factor relating to the amount and pace of new development. In addition, service providers are constrained by the availability of financial resources to improve and expand existing facilities and services.

3.8.1 Electricity

Electricity in Santa Paula is supplied by Southern California Edison Company (SCE). High voltage, 66 kilovolt, transmission lines exist crossing Ojai Road (SR 150), along a portion of 12th Street south of Orchard Street, and along the south side of the railroad tracks east of 12th Street. A Southern California Edison substation, (the "Wakefield Substation"), is located south of the railroad tracks at the intersection of 12th Street and the railroad tracks. SCE will service and maintain the project area's electrical facilities. The Specific Plan includes relocation of transmission mains along the Santa Paula Creek side of the project. New local serving electrical lines will be placed underground. All conduits will be with full encasement. The East Area 1 Specific Plan includes energy conservation related design standards to reduce electric energy consumption. In addition, the East Area 1 Specific Plan will observe the following setback requirements for residences (including private residential yards), schools and designated recreational facilities: 100 feet from 100-110kV lines and 150 feet from 220-230 kV lines.

3.8.2 Gas

The Southern California Gas Company (SCG) provides natural gas in Santa Paula. SCG serves much of Southern California with a network of transmission and distribution lines. An existing 12-inch high-pressure supply line runs east-west in Telegraph Avenue (SR126). This line feeds pressure reducing stations supplying the City. Major distribution lines run from these stations. These in turn, branch into the network of smaller gas mains in all of the streets. Service connections will be provided and maintained throughout the East Area 1 Specific Plan area as needed.

3. Infrastructure and Public Services

3.9 Parks and Recreation

3.8.3 Telephone

Telephone service and maintenance to the area is provided by Verizon. Telephone facilities will be located underground within the streets rights-of-way. No overhead telephone facilities will be permitted.

3.8.4 Cable

Cable television is provided in the area by Time Warner. This company will serve the East Area 1 Specific Plan area. Cable television facilities will be located underground within public rights-of-way.

3.9 Parks and Recreation

3.9.1 Existing Conditions

The City of Santa Paula currently owns 11 public parks and recreational facilities (9 parks, one community center and one Boys and Girls Club) totaling 36.5 acres. The largest park is George Harding Park, which comprises 13 acres. Most of the other parks in the City are between one and six acres.

A portion of the Santa Paula Branch Line Recreational Trail is currently planned. In addition, the City has a Class I bikeway on Cemetery Road, south of Santa Paula Street, and several Class II bikeways.

The City of Santa Paula General Plan sets forth a standard of five acres of parkland per 1,000 residents. Using the 2005 City population estimate of 29,281 persons and its existing parkland acreage of 36.5 acres, there is a parkland shortfall of 109.9 acres.

3.9.2 Proposed Conditions

The East Area 1 Specific Plan includes recreational amenities and open spaces that will contribute to both the desirability and livability of the community. These areas will provide a diverse variety of spaces for family- and community-oriented recreation. The parks vary in size to accommodate a number of different amenities so that each park has its own character and provides a combination of passive and active recreation opportunities within the Specific Plan area. The green spaces include playfields, formal plazas, community and neighborhood

parks, pocket parks, and large greenways that run the full length of the community along the creek fronts, with hiking trails.

Approximately 223 acres (44%) of the East Area 1 Specific Plan area will consist of undeveloped land, consisting of open space uses (including parks and greenways, shared athletic fields, and open space preserve) and agricultural preserve. A total of approximately 89 acres will be parkland that includes the following: approximately 66 acres of neighborhood parks and greenways in the Santa Paula Creek Neighborhood, Hillside Neighborhood, Haun Creek Neighborhood and Santa Paula Creek Civic District; and approximately 23 acres of shared use athletic fields in the Civic District, available for school and community use. Each park will be fully accessible via an integral system of sidewalks and multi-use paths, all of which meet current accessibility standards. Approximately 79 acres will remain open space preserve. Approximately 55 acres will remain in active agricultural operations and will not be open to the public. Refer to Section 5.9 for additional details regarding the development standards for the open space and park areas. Table 2-2 provides an undeveloped land summary.

3.10 Thoroughfares

3.10.1 Existing

The existing site is primarily agricultural. Existing thoroughfares through the site are dirt roads to access the existing orchards within East Area 1.

3.10.2 Proposed

The approach to thoroughfares and thoroughfare design is based on the fundamental practice of using an interconnected and varied pattern of context-sensitive thoroughfares to serve a variety of situations based on the urban design and programmatic objectives for the plan area. The plan-area's circulation system consists of a hierarchical deployment of particular thoroughfare types for specific physical applications. Across the plan area, these types range from plan-wide connectors to very short streets defining a public space to pedestrian passages and alleyways. Such a wide range of types serves to both organize and define the 54 blocks for specific contexts, generating a system that accommodates vehicular traffic. The following characteristics are associated with this approach:

3. Infrastructure and Public Services

3.10 Thoroughfares

- a. Mixed land uses in close proximity to one another and relatively compact development.
- b. A highly-connected multi-modal circulation network with a 'fine grain' created by relatively small blocks.
- c. Building entries front directly on to thoroughfares without parking between entries and the public right-of-way.
- d. Building, landscape and thoroughfare design that is pedestrian-scale, providing architectural and urban design detail with size and design appreciated by persons who are traveling slowly and observing from the street level.
- e. Thoroughfares and other public spaces that contribute to 'place-making' – the creation of unique locations that are compact, mixed-use and pedestrian-oriented with a strong civic character and lasting economic value.

Further, the following policies specifically inform the design, execution and maintenance of thoroughfares in the plan area:

- a. Limited lane widths to appropriately calm traffic.
- b. Two-way traffic and on-street parking to maximize frontage and mobility options.
- c. Tighter curb radii to calm traffic and thus improve pedestrian safety and walkability.
- d. Ample sidewalks and generous streetscapes to maximize appeal and image.
- e. Compatible lighting that is responsive to its context while providing safety and appeal.

Based on the above, the plan area uses a total of 15 thoroughfare types in five general categories to create the palette of blocks that comprise the proposed development - see Figure 3-11. In support of Specific Plan goals and particularly to establish three neighborhoods and two districts, the thoroughfare types are identified at a general level as to their overall category. Each category receives the appropriate number of thoroughfare types to address the needs of the plan as to specific purpose and function. One particular thoroughfare type, the Paseo, is a pedestrian-oriented thoroughfare that provides mid-block access on longer blocks, particularly in the Foothill Neighborhood. This type can also be used in an urban context, for instance between buildings to access mid-block parking.

To further illustrate the depth and versatility of the proposed thoroughfare network, each of the 5 categories and their corresponding thoroughfare types are summarized in Table 3-3. Figure 3-11 identifies the locations of the thoroughfare categories. Each thoroughfare type is described in greater detail in Section 5.8.

Table 3-3: Thoroughfare Categories and Types

Classification	Thoroughfare Type
Major Commercial	Hallock Commercial Street
Commercial/Industrial	Santa Paula Street
	Santa Paula Creek Bridge
	Residential Collector
Residential Collector	Hallock Drive A
	Hallock Drive B
	Santa Paula Creek Drive
	Teague-McKevett Boulevard
	Central Park
Residential	Park Blocks
	Palm Avenue
	Neighborhood Street
Other	Alley
	Paseo
	Trail I
	Trail II

Source: HDR Town Planning, 2007

3. Infrastructure and Public Services

3.10 Thoroughfares

Figure 3-11: Thoroughfare Categories



Source: HDR Town Planning, 2007

3. Infrastructure and Public Services

3.11 Goals, Policies and Programs

3.11 Goals, Policies and Programs

Goals

1. To provide the level of public services desired by the residents at a reasonable cost.
2. To ensure the provision of public services keeps pace with new development.

Policies

General:

1. Development must provide for orderly urban expansion.
2. Public facilities should be located and designed so that noise, light, odors, and appearances do not adversely affect nearby land uses.
3. Builders are encouraged to use designers familiar with sustainable practices when conceiving their projects in order to gain the greatest amount of benefit from these systems.
4. Sustainable development is encouraged.

Water Conservation:

1. Developers must employ the efficient use of water and reduced water demand by requiring water-conserving design and equipment in new construction and by encouraging water-conserving landscaping and other conservation measures.
2. The majority of landscaping for both public and private projects must employ low water demand/drought tolerant native plants.
3. In any turf areas within public spaces, street medians or landscaping barriers, hydro tension-meters and automatic irrigation systems (or similar technology) must be used to achieve the most effective use of water applied to turf.
4. The East Area 1 Specific Plan requires the use of water conservation measures to reduce water demand. These include the use of high-efficiency clothes-washing machines, ultra low-flow toilets, low-flow shower heads, and evapotranspiration sensor based irrigation controllers, and other such devices to reduce domestic water consumption.

Drainage and Flood Control:

1. Natural drainage systems will be encouraged where feasible to preserve and enhance natural features.
2. Improve the quality of urban storm water runoff and quality of groundwater recharge through the use of appropriate mitigation measures including, without limitation, infiltration/sedimentation basins, oil/grit separators, and other best management practices (such as storm water retention).
3. Require new development to adequately mitigate increases in storm water peak flows and/or volume. Peak water discharge into the Santa Clara River and Haun Creek cannot exceed existing conditions. Mitigation measures must consider impacts on adjoining properties and impacts on groundwater recharge related to existing and proposed water wells.
4. Engineered drainage plans must incorporate a collection and treatment system for storm water runoff consistent with the Ventura Countywide Stormwater Quality Urban Impact Mitigation Plan.
5. Development must mitigate risks from floods.

Police Protection:

1. Public safety issues must be considered in all aspects of commercial and residential project design, including crime prevention through design.

Fire Protection:

1. Development must incorporate designs, systems and practices for fire safety, prevention and suppression.
2. All proposed developments must be reviewed for compliance with fire safety standards in accordance with the SPMC.

Grading:

1. Retain significant natural hillsides and ridgelines where feasible, while allowing for required street access and Neighborhoods.
2. Provide contour grading of significant slopes
3. Round edges of manufactured slopes to blend into natural terrain, where feasible.
4. Avoid "estate" pad sizes to reduce grading.

3. Infrastructure and Public Services

3.12 Inclusionary Housing Plan

Programs

1. Complete on-site water distribution lines in the East Area 1 Specific Plan Area to serve individual parcels. Pipe connections will include adequate looping to provide redundancy for the system.
2. Place fire hydrants at most intersections and every 500 feet. Fire hydrant locations will be reviewed and approved by Santa Paula Fire Department.
3. Complete on-site sewer mains in the East Area 1 Specific Plan Area to serve individual parcels. Determine the location and size of utility lines during the design of each neighborhood.
4. Complete a storm water collection system that connects into Santa Paula Creek and/or Haun Creek. The storm water collection system for the East Area 1 Specific Plan will primarily consist of storm water inlets with underground piping systems, which will discharge low flows into pretreatment areas such as bio-filters (vegetated swales/strips).
5. Construct storm drain detention facilities to mitigate the increase of the developed condition peak flow over the undeveloped peak flow. The detention sites may consist of detention basin(s), dual use basins, and/or underground storage. Any detention basin deeper than 18 inches will be designed to avoid the need for perimeter fencing.
6. Submit development plans to the police department and fire department to ensure to the extent practical that design of the project facilitates public safety.
7. Install utilities underground to secure such utilities from damage.

3.12 Inclusionary Housing Plan

The City recognizes that there is a housing shortage within Santa Paula and that its residents are frequently unable to transition from rental housing to ownership housing. The City and developer are concerned that increasing housing costs within Ventura County deny young people the opportunity to live and work within their community.

The SPMC requires residential developments that exceed 10 dwelling units to provide affordable housing. The Specific Plan land use plan includes up to 150 affordable units, which represents approximately 15% of the 1500 units proposed for the Specific Plan Area.

Location of affordable housing units will be throughout the Neighborhoods, except for the Foothill Neighborhood. The inclusionary units will consist of for-sale deed-restricted live/work, multi-family and attached single-family dwelling units. These housing types are appropriate for City workers, teachers, hospital workers, fire fighters, and police officers.

This obligation may be satisfied by payment of an in-lieu fee in accordance with the SPMC or as may be provided in the Development Agreement.