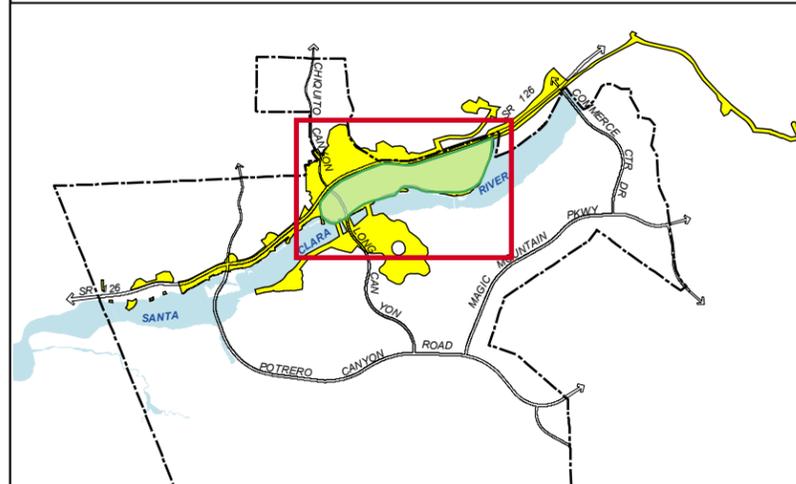


Legend:

Village Center

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station



Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation

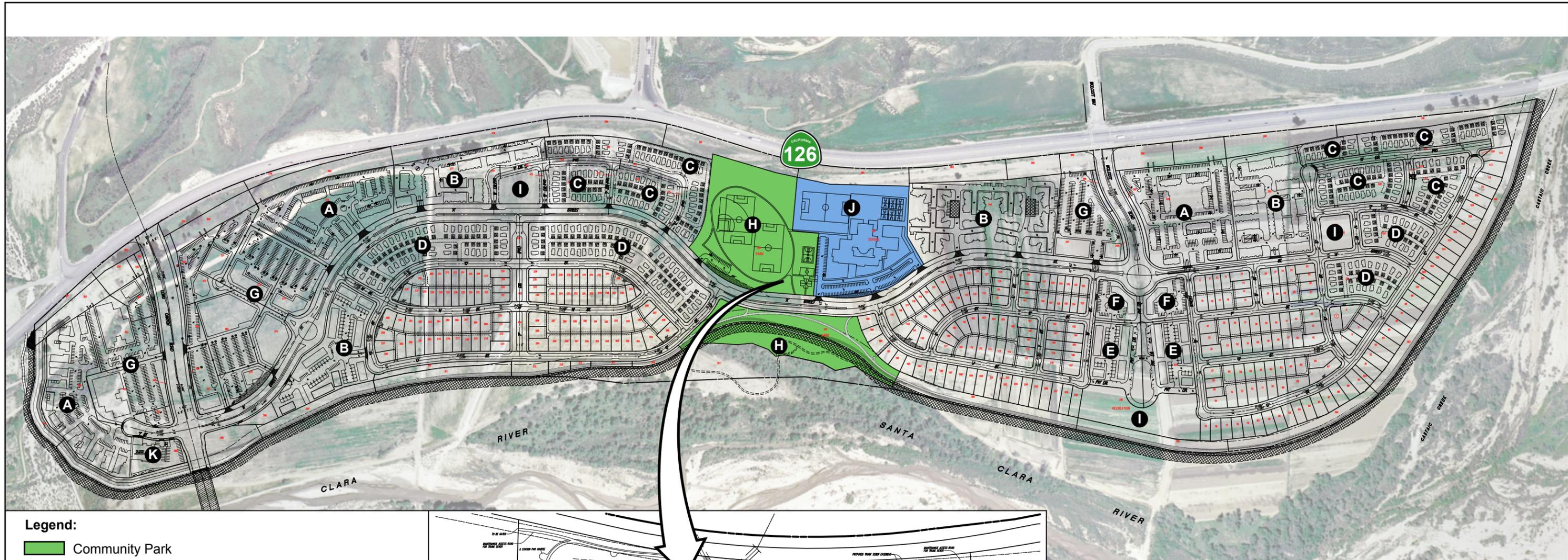


NOT TO SCALE

SOURCE: PSOMAS – August 2004, Impact Sciences, Inc. – September 2006

FIGURE 1.0-16

Conceptual Site Plan – Village Center Area

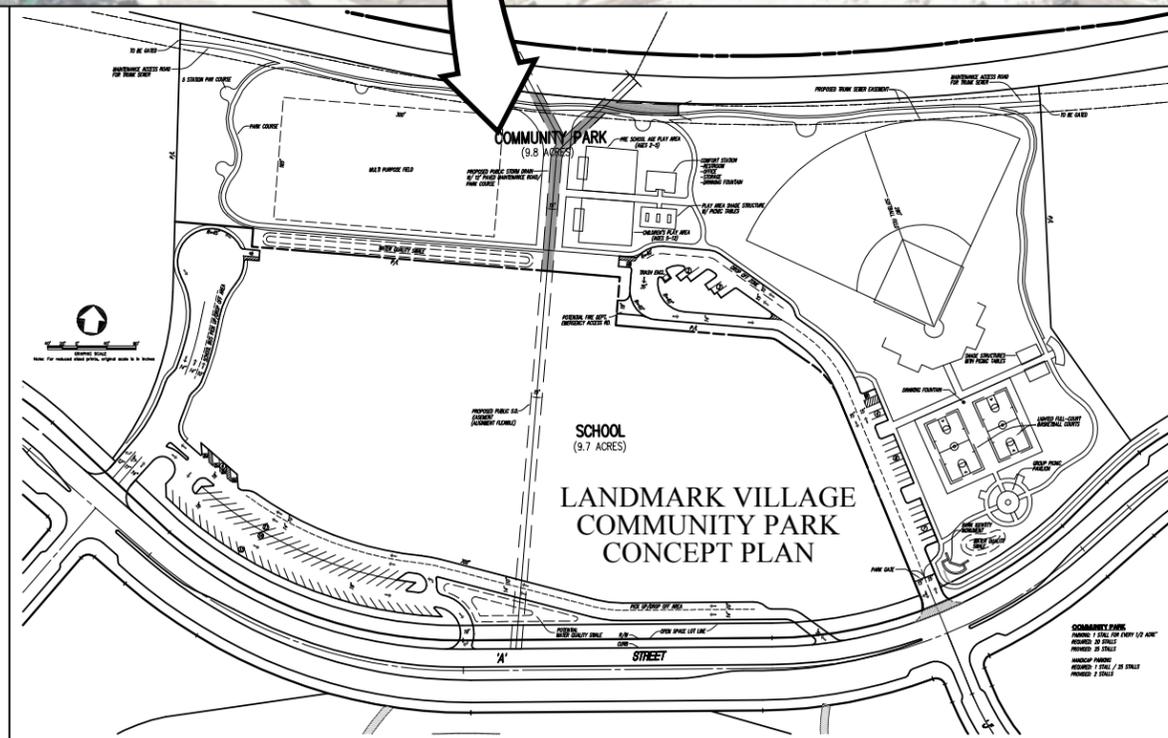


Legend:

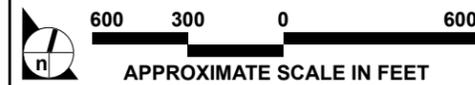
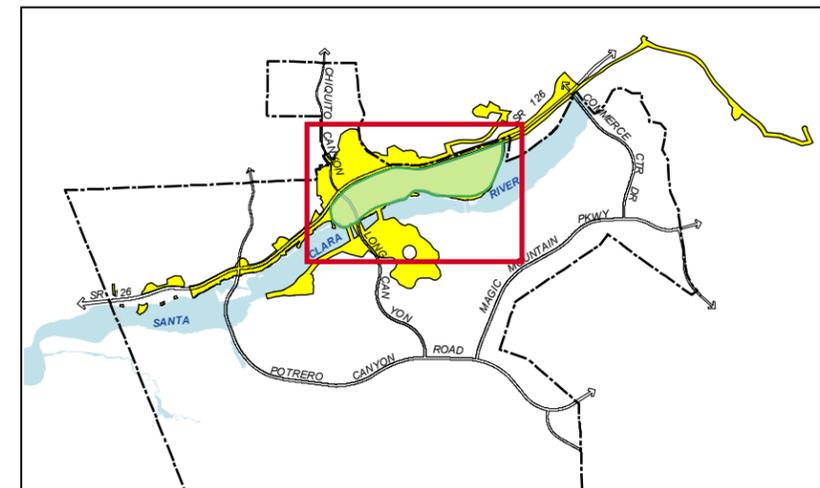
- Community Park
- Elementary School

Land Use:

- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
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- J** School
- K** Fire Station



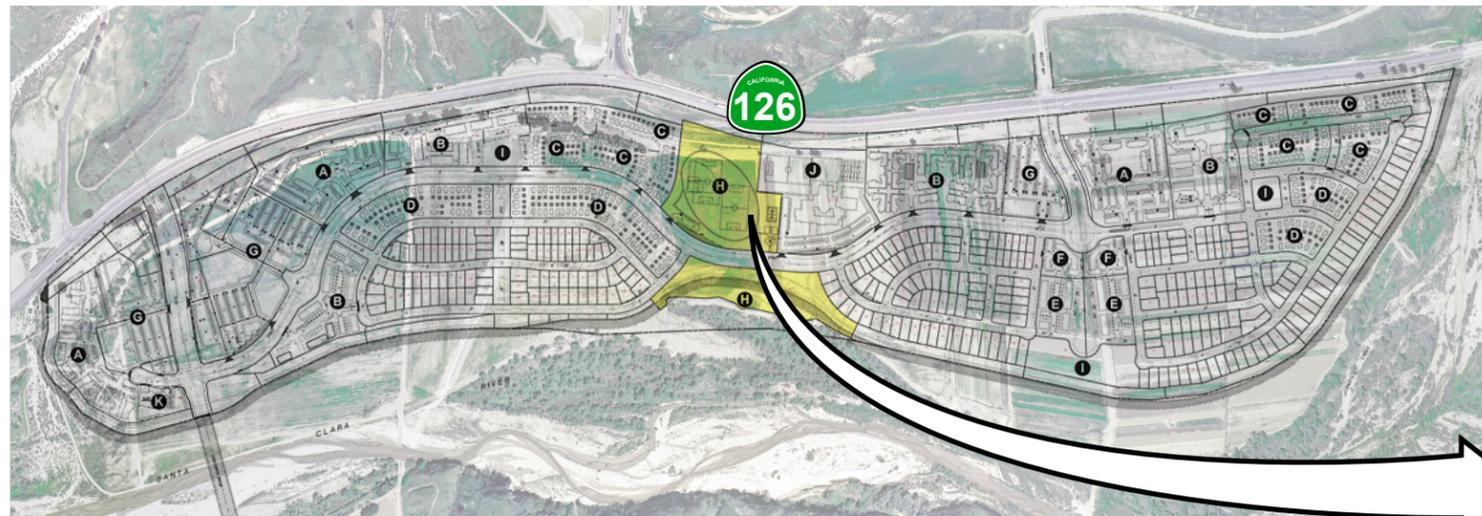
Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation.



SOURCE: PSOMAS – August 2007, Impact Sciences, Inc. – September 2006

FIGURE 1.0-17

Elementary School/Community Park



Depiction of Passive Area



**NEWHALL LAND
LANDMARK VILLAGE (VTTM 53108)
COMMUNITY PARK - LOT 344
SCHEMATIC LANDSCAPE DESIGN PLAN**



Legend:

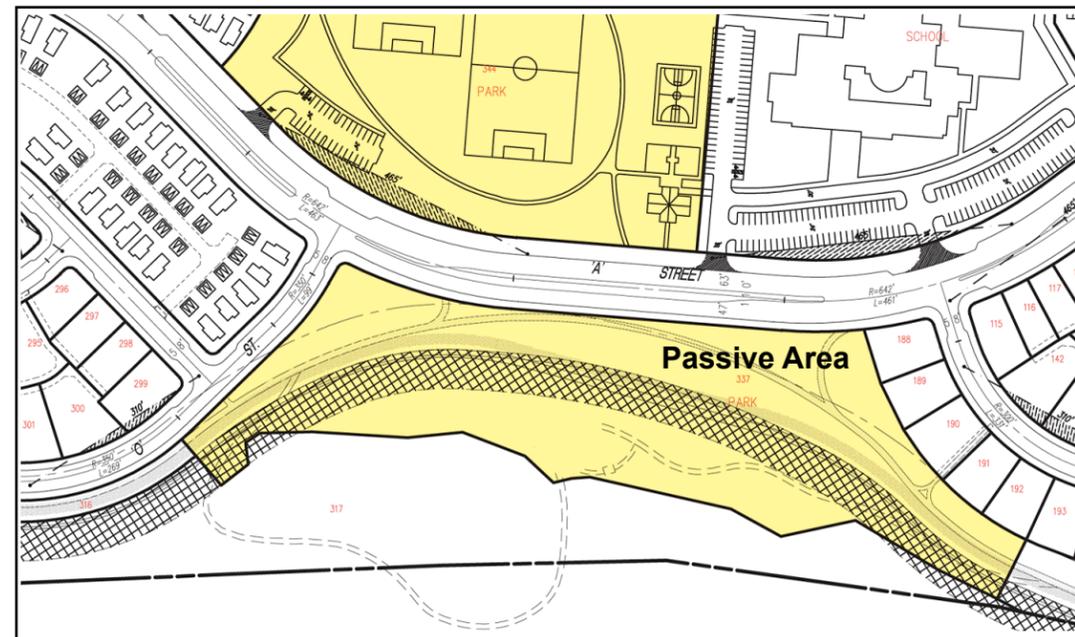
- Community Park
- Buried Bank Stabilization

Land Use:

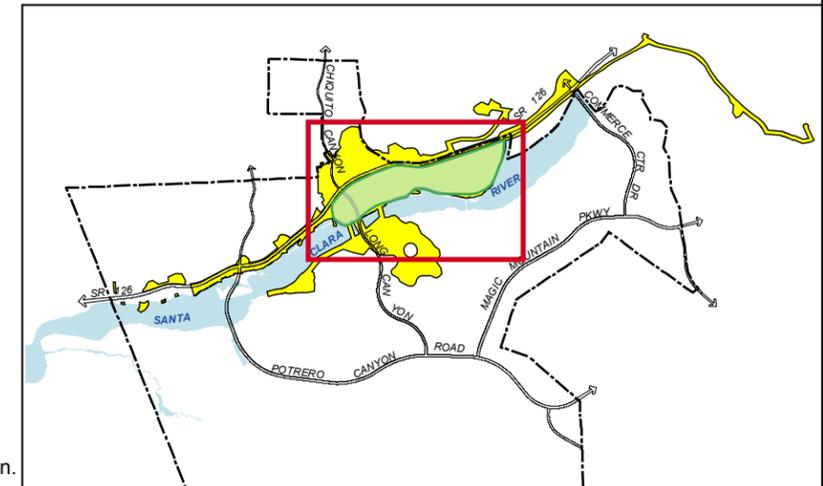
- A** Apartment – 3 Story
- B** Condominium – 3 Story
- C** Detached Condominium – 2 Story (32' MDE-Condo 1)
- D** Detached Condominium – 2 Story (38' MDE-Condo 2)
- E** Mixed Use/Condominium – 2 Story
- F** Mixed Use/Commercial – 2 Story
- G** Commercial
- H** Park
- I** Recreation
- J** School
- K** Fire Station



NOT TO SCALE



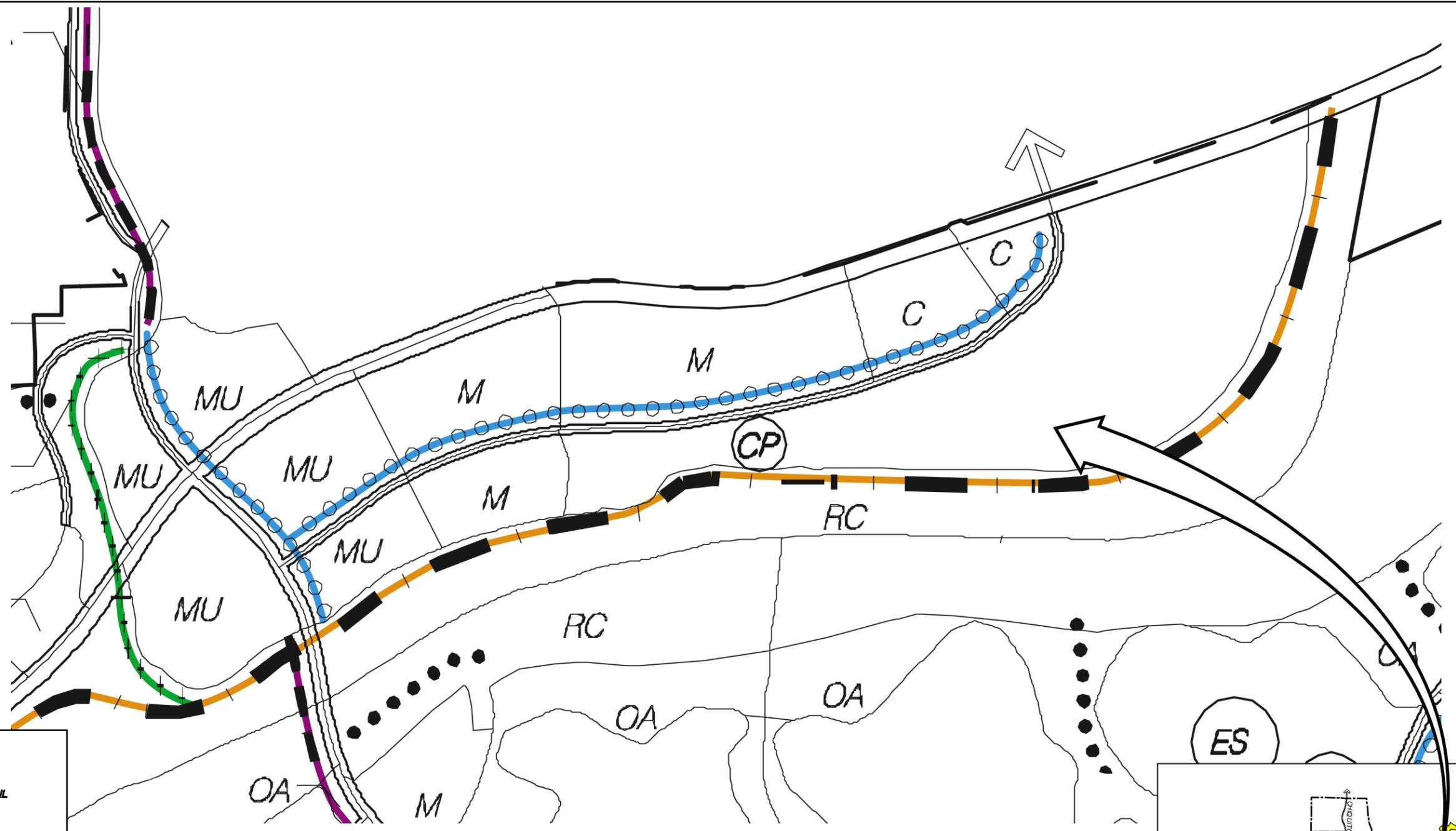
Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation.



SOURCE: PSOMAS – August 2007, Impact Sciences, Inc. – September 2006

FIGURE 1.0-18

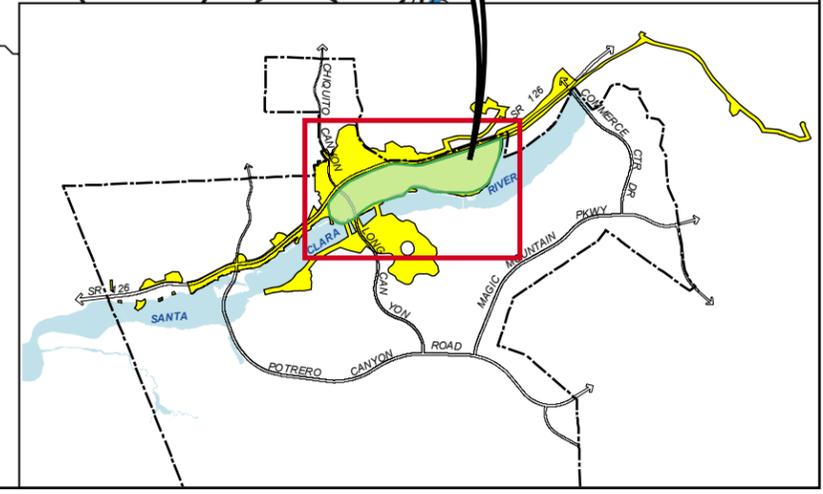
Conceptual Site Plan – Community Park



Legend:

- REGIONAL RIVER TRAIL
- COMMUNITY TRAIL
- EQUESTRIAN TRAIL COMPONENT OF COMMUNITY TRAIL
- LOCAL TRAIL
- PATHWAY
- UNIMPROVED TRAIL

NOT TO SCALE



SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-19

Landmark Village Portion of Specific Plan Master Trails Plan

Figure 1.0-20, Landmark Village Trails Plan, depicts the trails and paseos that fulfill the intent of the Specific Plan's Master Trails Plan. It provides a tract map level of detail necessary to ensure that each residential neighborhood and community service area is linked to one or more pedestrian, bicycle or equestrian trails or paseos, with locations for river trail access points and observation/interpretive points.

The Landmark Village trails plan implements the Specific Plan's objective of providing a hierarchy of trails with varying sizes and functionality. For example, the Landmark Village project would implement a significant portion of the Specific Plan's Regional River Trail system. This trail would be constructed along the Santa Clara River beginning at the northeastern tract map boundary along Castaic Creek, and extend west along the river through the entire southern boundary of the Landmark Village tract map site. Trails will be located at the top of bank stabilization. This trail corridor is approximately 35 feet wide and approximately 2 miles in length. The bike and pedestrian portion of the trail would be constructed of asphalt or similar material. Themed fencing would define the perimeter of the trail and the alignment would be landscaped with native plant materials.

As shown on **Figure 1.0-20**, the Landmark Village tract map site would provide an extensive Community Trail system throughout the residential portions of the project, which would be linked to the Regional River Trail, local trails, and paseos. Community trails are unified pedestrian and bicycle routes in landscaped parkways. They are located along highways in order to connect the Specific Plan villages.

Local trails such as paseos, or walkways, are proposed to provide a means of pedestrian access from residential neighborhoods to and from the Community Park, recreation centers, elementary school, and Mixed-Use/Commercial areas. The paseos would adjoin major roadways and certain residential collector streets, and be separated from vehicular traffic by a landscaped parkway (**Figure 1.0-20**). Trees and other landscaping materials may line local trails to make them an identifiable route, but often they follow natural drainages within Open Areas and require little or no landscaping.

(i) Site Access and Circulation

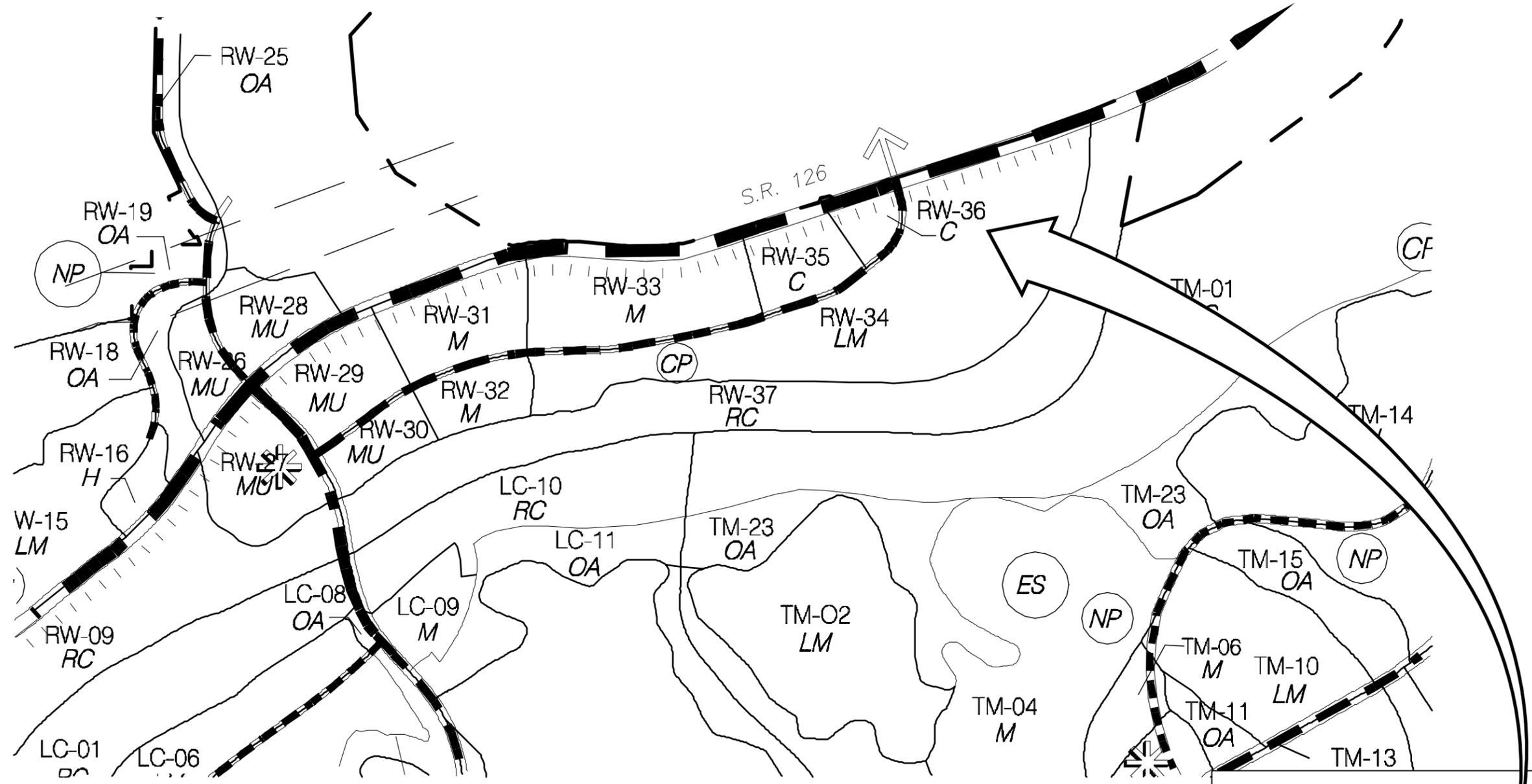
The project-level circulation system is consistent with, and implements, the mobility objectives of the Specific Plan's approved Master Circulation Plan (Specific Plan Exhibit 2.4-2). The Specific Plan's Master Circulation Plan was designed as a flexible mechanism by which necessary circulation modes of travel within the Specific Plan area could be integrated with existing regional road networks. The County found that the Specific Plan's mobility objectives were consistent with the transportation goals and objectives of the Los Angeles County General Plan and Santa Clarita Valley Area Plan. **Figure 1.0-21** depicts the Specific Plan's Master Circulation Plan, as it relates to the Landmark Village project site.

The project's circulation plan is characterized by a system of local streets with access to and from a curvilinear road ("A" Street) that traverses the site in an east/west direction. Two north/south roadways, Wolcott Road and Long Canyon Road, would connect "A" Street to the off-site highway system (SR-126). The primary function of "A" Street is to provide connectivity between the Landmark Village neighborhoods and access from local streets to the arterial highway system.

The project proposes to construct Long Canyon Road and the connection to Wolcott Road, which would provide regional access to and from SR-126. The proposed project would construct interim signalized intersections at Wolcott Road and Long Canyon/Chiquito Canyon Road with SR-126 and would facilitate the project's planned future interchange alignment for Long Canyon Road/SR-126. This future grade separated crossing would be constructed if future traffic volumes determine that the crossing is warranted. In conjunction with the construction of the interchange, the existing Chiquito Creek culvert under SR-126 would be demolished and bridged. The environmental impacts associated with this future crossing is evaluated in this EIR. The proposed project also would construct a network of collector streets to provide local access to and from land uses associated with the project (see **Figure 1.0-10, Landmark Village Vesting Tentative Tract Map No. 53108**). These roadways would connect to "A" Street, Wolcott, and Long Canyon Roads. All roadways would be constructed in substantial conformance with the requirements of the Specific Plan and, in many cases, would require only minor project-specific modification to the street sections set forth in the Los Angeles County Subdivision Code.

The one change from the Specific Plan's Master Circulation Plan would be the project applicant's request to revise the "A" Street classification from a four-lane Secondary Highway to a two-lane Collector Street. The Secondary Highway designation is also included in the County's Master Plan of Highways and the Santa Clarita Valley Area Plan's Circulation Plan.

Figure 1.0-22, Cross-Section Comparison – Specific Plan Secondary Highway vs. Landmark Village Collector, depicts a cross-section for a Secondary Highway as specified by the County. As shown, a Secondary Highway designation provides 94 feet of right-of-way that contains 64 feet of travel lanes separated by a 14-foot median with an 8-foot parkway on either side of the road. For purposes of comparison, **Figure 1.0-22** depicts the cross-section for the proposed Landmark Village "A" Street Collector. As shown, the proposed Collector Street typically provides 60 feet of travel lane with a 14-foot median, for a total street width of 74 feet from curb-to-curb. An additional 26 feet of landscape parkway and meandering sidewalk is found on the north side of the street, while the north side contains 4 feet of landscape parkway, along with a 6-foot paseo/walkway. The proposed Collector Street's total right-of-way is 110 feet in width, which is slightly different than the Secondary Highway designation.



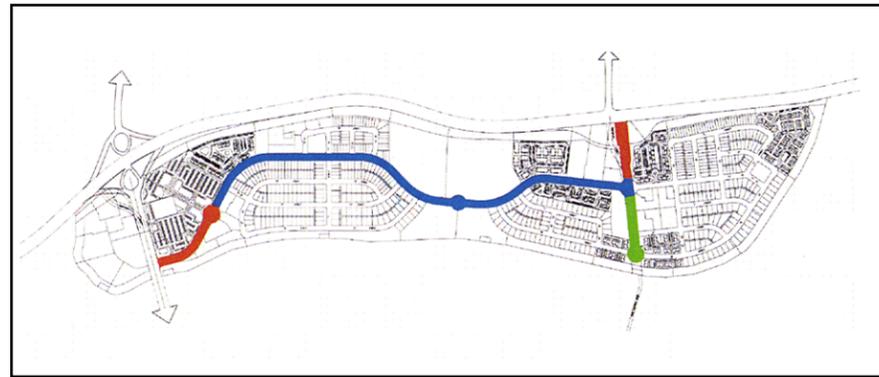
- LEGEND**
- STATE HIGHWAY
 - MAJOR HIGHWAY
 - SECONDARY HIGHWAY
 - COLLECTOR
 - POSSIBLE FUTURE COLLECTOR ALIGNMENT
 - BUS PULL-IN

NOT TO SCALE

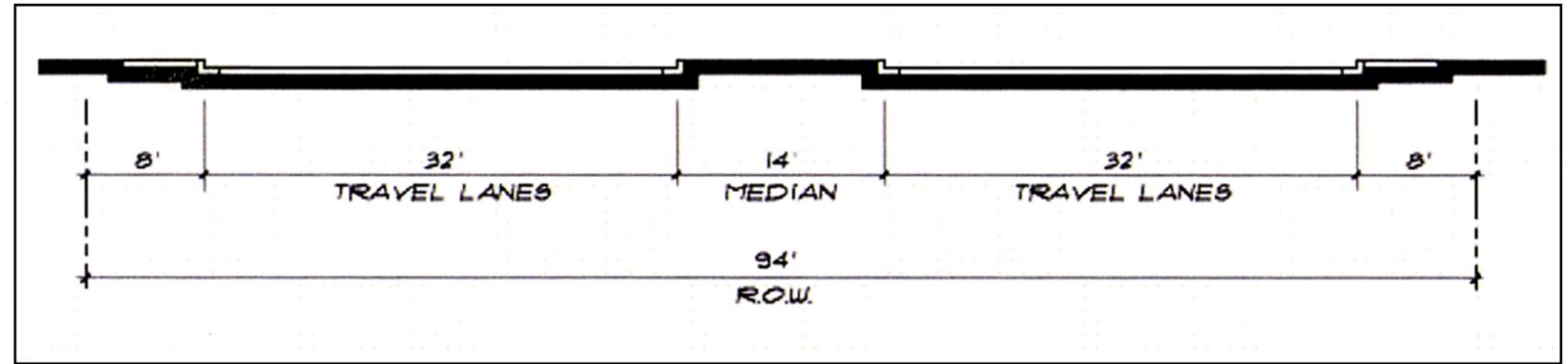
SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-21

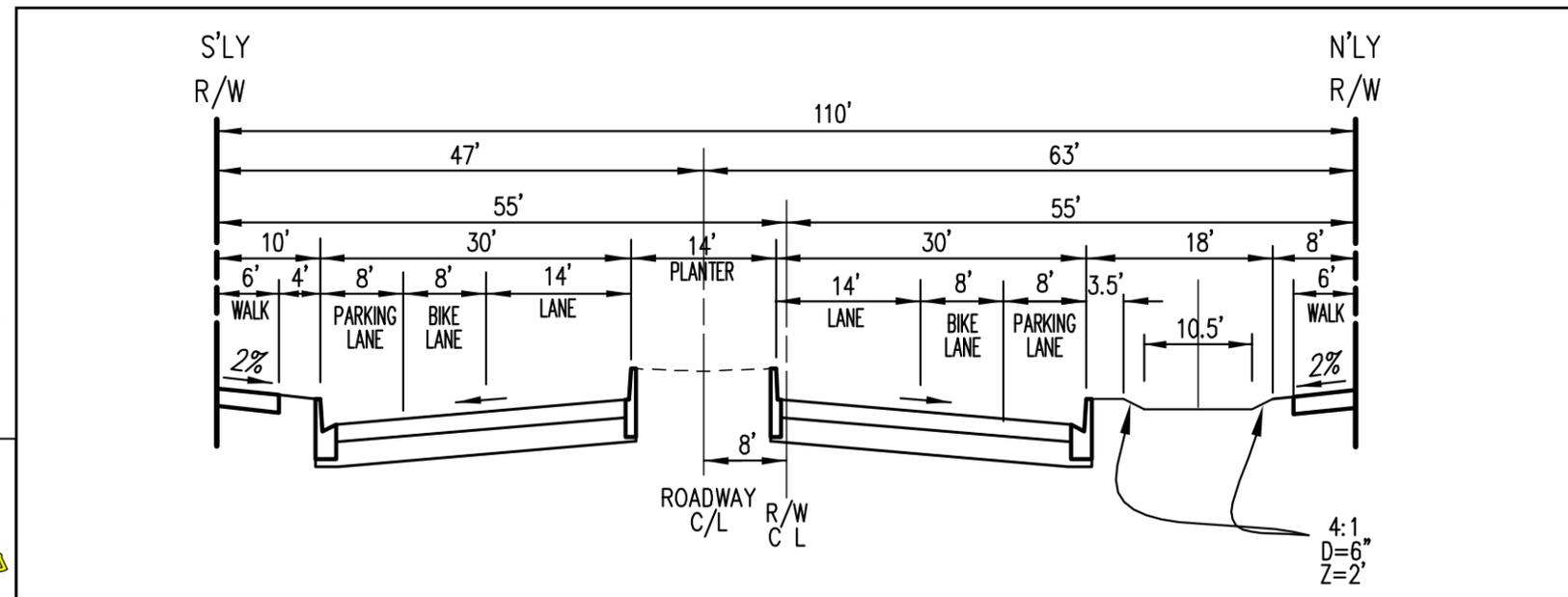
Landmark Village Portion of Specific Plan Master Circulation



Key Map

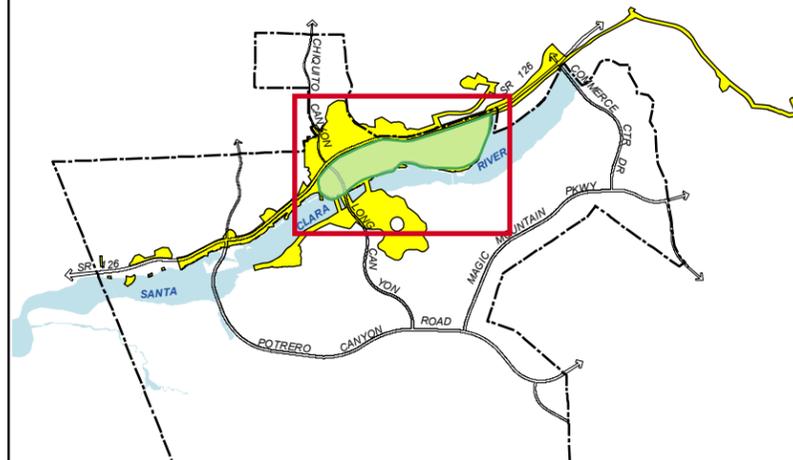


Specific Plan Secondary Highway



Landmark Village Spine Road Collector

- Legend:**
- Spine Road
 - Entry Road
 - Parkway



SOURCE: River Village Planning Book – August 2003

FIGURE 1.0-22

Cross-Section Comparison – Specific Plan Secondary Highway vs. Landmark Village Collector

Buildout of Landmark Village requires widening a segment of SR-126 to three lanes in each direction as it passes by the tract map site. This necessitates widening of the existing bridge over Castaic Creek on both sides to accommodate the augmented six-lane expressway. The proposed project also provides 8 acres located within a 35-foot-wide strip of land along SR-126 for the future reservation of a rail right-of-way that runs parallel to the south side of SR-126. The mixed-use/commercial areas planned along Wolcott Road also permit a park-and-ride lot. In addition, the mixed-use/commercial area in the vicinity of Wolcott Road reserves a future transit station within the project site.

(j) Long Canyon Road Bridge

As part of the project approvals for the Newhall Ranch Specific Plan, the Los Angeles County Board of Supervisors approved a program-level SEA CUP (No. 94-087-(5)) on May 27, 2003. The SEA CUP approved three elevated highway bridge crossings over the Santa Clara River, including the general alignment for the Long Canyon Road Bridge. The number and general location of the bridge crossings within the Specific Plan were established to minimize impacts to sensitive habitat and species within the River Corridor SMA/SEA 23, and to minimize major access points to SR-126. Each of the bridge crossings is an extension of an existing road, creating a functional regional circulation system.

The project applicant is proposing to construct the Long Canyon Road Bridge component of the Specific Plan, in conjunction with the Landmark Village project. The Long Canyon Road Bridge is one of the three bridge crossings over the Santa Clara River, and it would serve central portions of the Newhall Ranch Specific Plan. The new bridge would span the width of the Santa Clara River, equating to a roadway segment of approximately 1,000 feet in length and 100 feet in width. A six-lane highway would be constructed that extends from the proposed realignment of the existing Chiquito Canyon Road/SR-126 intersection in a southerly direction over the Santa Clara River to the proposed bridge terminus. Bridge supports would be constructed and consist of concrete piers to be located within the River Corridor SMA/SEA 23. Each support would be spaced approximately 100 feet apart. In addition, abutments and bank stabilization (including gunite, soil cement and riprap) would be required on either side of the bridge to protect against erosive/scouring forces. The abutments and bank stabilization areas are also located within the River Corridor SMA/SEA 23.¹² **Figure 1.0-23, Location of Long Canyon Road Bridge and Proposed Bank Stabilization**, illustrates the bridge and related River Corridor improvements in relation to the Landmark Village project site.

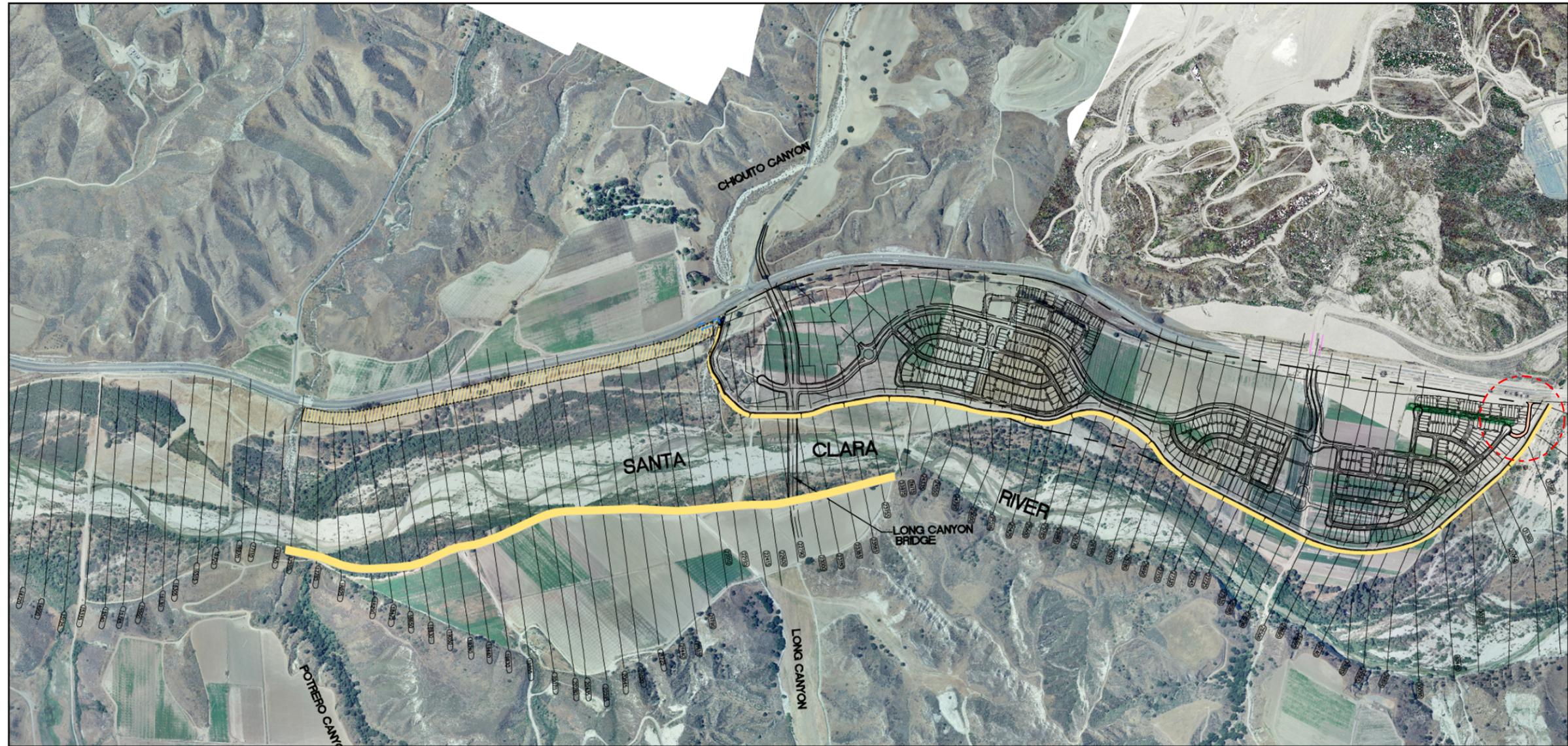
¹² For a detailed discussion of the environmental effects of the bridge and related improvements, please see **Section 4.2, Hydrology**, and **Section 4.4, Biota**, of this EIR.

(k) Drainage/Flood Control

The Landmark Village project-level drainage and water quality plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Drainage Plan (Specific Plan Exhibit 2.5-1). The primary objective in developing the Specific Plan Backbone Drainage Plan was to identify conceptual drainage and flood protection system for the entire Specific Plan site, while preserving the Santa Clara River as an important natural resource. In order to satisfy this objective, several program-level criteria regarding the form and function of the Santa Clara River were identified early in the planning process, which formed the basis for establishing the River Corridor SMA/SEA 23. In addition, the Specific Plan established a commitment to meet the ongoing requirements of all National Pollutant Discharge Elimination System (NPDES) Permits, including drainage/water quality improvements, such as water quality basins, vegetative swales, and inlet and outlet structures. The locations and sizing of such improvements were to be determined as part of the Newhall Ranch tentative subdivision map process. **Figure 1.0-24** depicts the Specific Plan's Conceptual Backbone Drainage Plan as it relates to the Landmark Village project site.

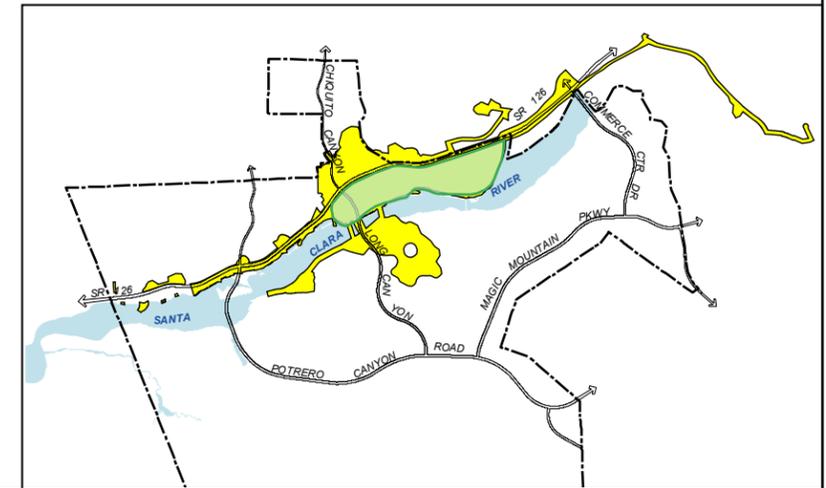
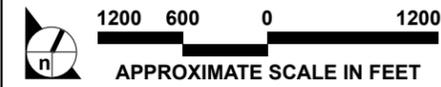
Figure 1.0-25, Landmark Village Drainage and Water Quality Plan, illustrates the project's proposed drainage and water quality plan and related improvements. The plan incorporates methodologies to meet or exceed the ongoing NPDES Permit requirements and conforms to the drainage and water quality requirements of the Specific Plan. The plan includes a comprehensive series of drainage, flood control, and water quality improvements designed to allow for a system to both protect development and preserve the Santa Clara River.

The proposed Landmark Village Drainage Concept is designed to provide drainage and flood protection, and to maintain storm water flows from the project during and after buildout at a level approximately equal to or less than pre-development conditions. As proposed, on-site surface runoff would be intercepted by curb, debris, and/or desilting inlets, and conveyed to a network of storm drains that lead to a series of treatment structures, including water quality basins and vegetated swales, prior to discharge into the Santa Clara River. In commercial areas, parking lot and roof runoff would be directed through landscaped parkways and grassy swales or through sections of pervious pavement to provide initial treatment prior to discharge into the drainage system. Flows from several unimproved drainages that drain the undeveloped watershed located north of SR-126 and discharge into the Santa Clara River would be intercepted and conveyed through the site to the river. At the confluence with Castaic Creek, the existing bank of the Santa Clara River would be modified to allow passage of storm flows generated during the County Capital Storm event (Qcap). Please refer to **Section 4.2, Hydrology**, of this EIR for a detailed discussion of existing and post-development drainage conditions and related improvements on the project site.



Legend:

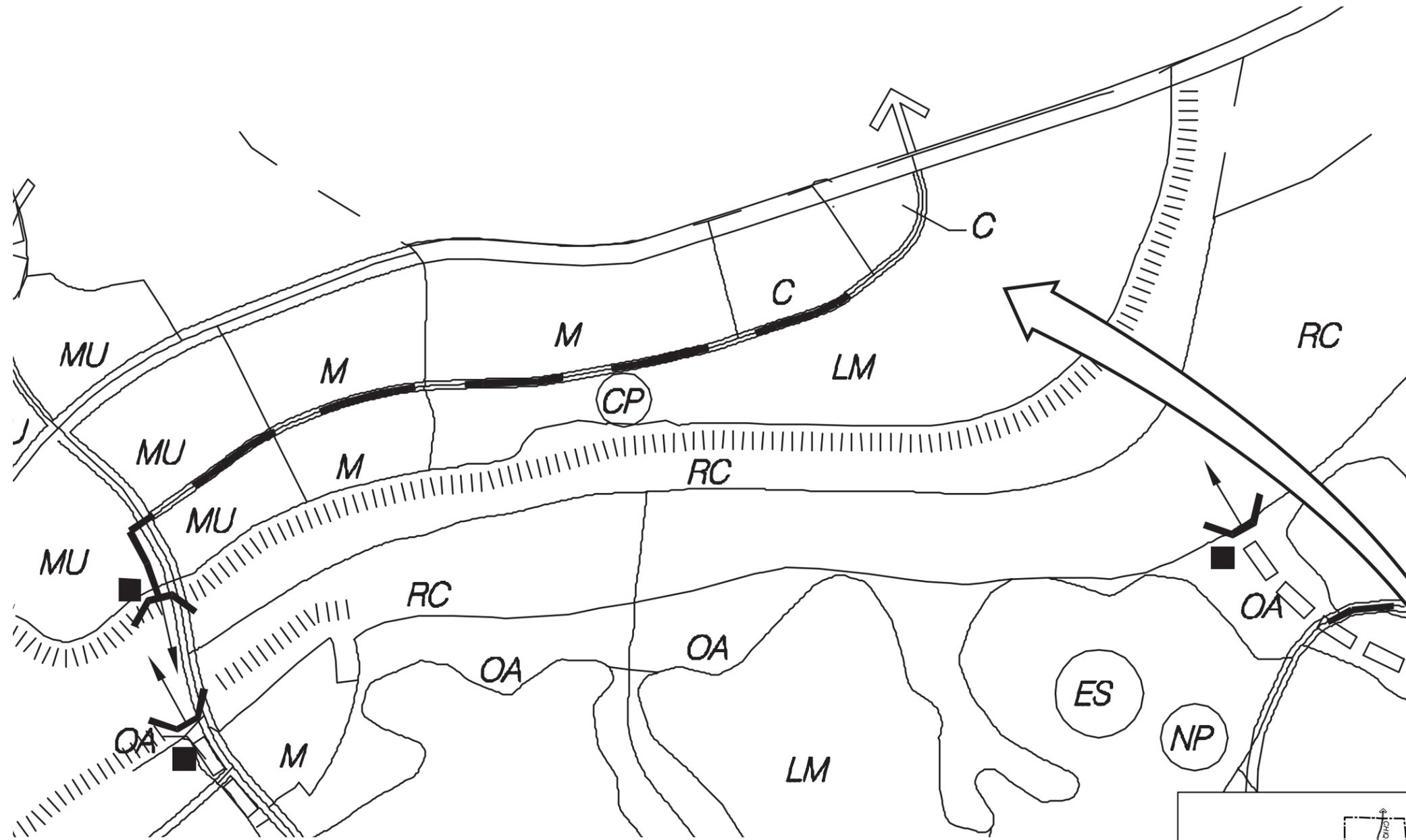
-  Residential Project Boundary
-  Proposed Soil Cement Bank Protection
-  Proposed Utility Corridor Bank Protection
-  Emergency access road



SOURCE: PACE Engineering – June 2005

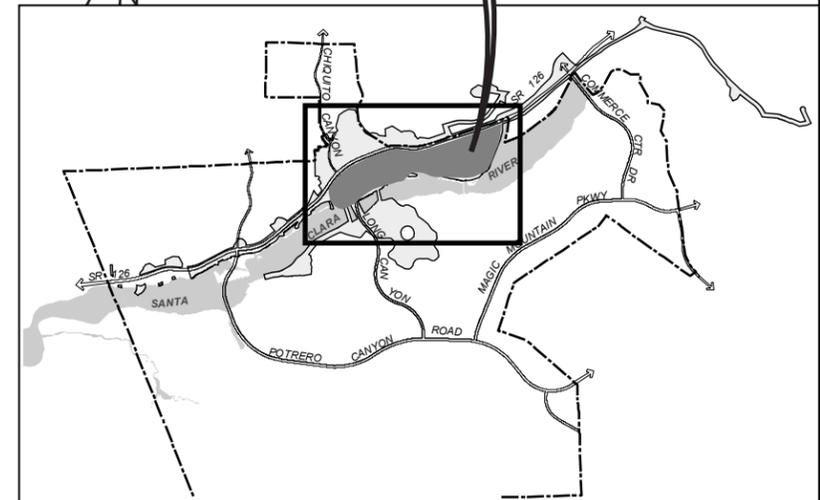
FIGURE 1.0-23

Location of Long Canyon Road Bridge and Proposed Bank Stabilization



Legend:

-  OPEN DRAINAGE
-  CLOSED SYSTEM
-  INLET
-  OUTLET
-  N.P.D.E.S. WATER QUALITY BASIN
-  BANK STABILIZATION



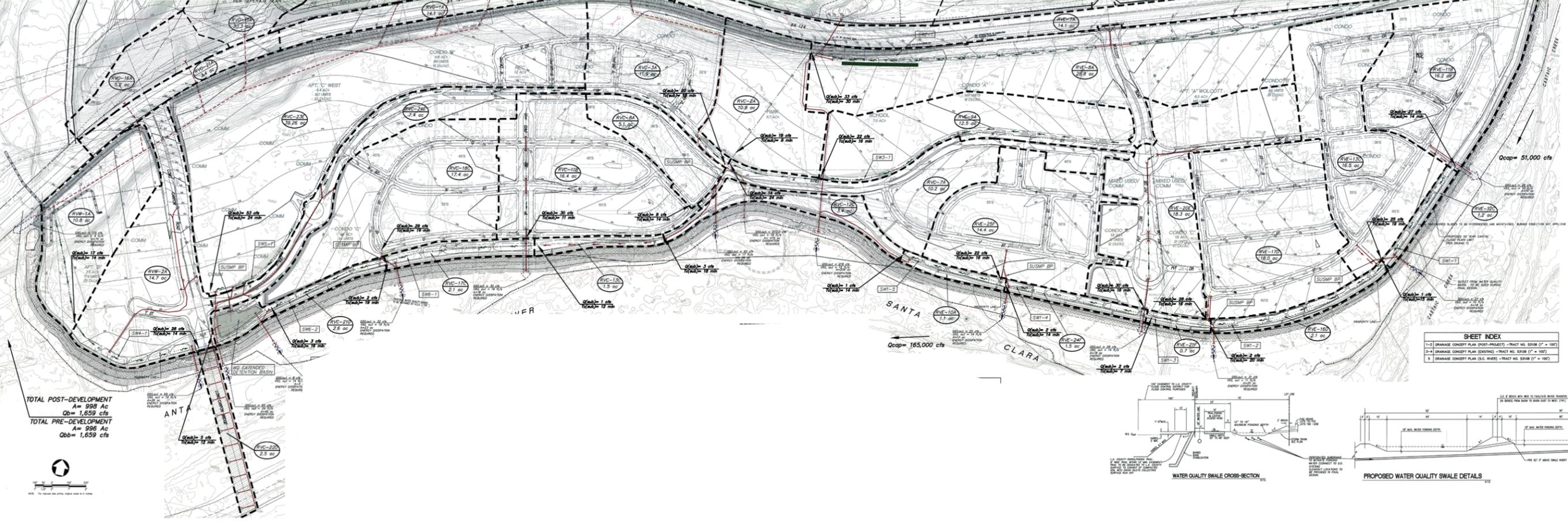
SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-24

Landmark Village Portion of Specific Plan Conceptual Backbone Drainage Plan

DRAINAGE CONCEPT NOTES

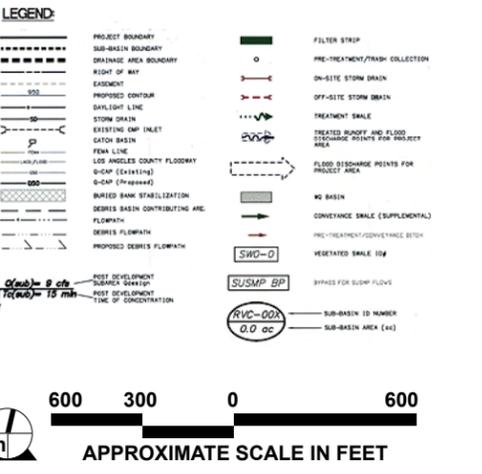
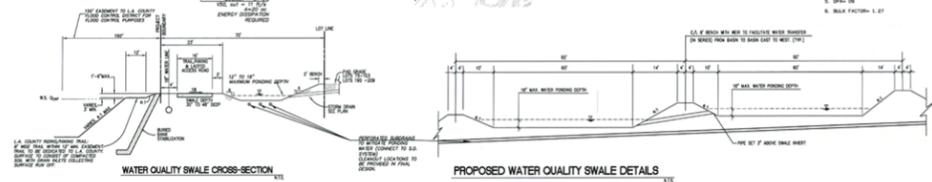
1. THE PROPOSED WATER QUALITY BASIN, SWALES, DEBRIS BASINS AND STORM DRAIN FACILITIES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING NOTES:
2. ALL STORM DRAINAGE FACILITIES WILL CONFORM WITH THE DRAINAGE DESIGN CRITERIA.
3. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
4. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
5. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
6. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
7. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
8. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
9. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
10. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
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12. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
13. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
14. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.
15. THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM SHALL BE BASED ON THE DESIGN OF THE DRAINAGE FACILITIES AND THE STORM DRAIN SYSTEM.



SHEET INDEX

1	DRAINAGE CONCEPT PLAN (POST-DEVELOPMENT) - TRACT NO. S3108 (1" = 100')
2	DRAINAGE CONCEPT PLAN (EXISTING) - TRACT NO. S3108 (1" = 100')
3	DRAINAGE CONCEPT PLAN (PRE-DEVELOPMENT) - TRACT NO. S3108 (1" = 100')

- DRAINAGE DESIGN CRITERIA:**
1. 50-YEAR DRAINAGE PERIOD: 2.0
 2. RAIN FALL: 5.0
 3. DESIGN FLOW: 40.0 CFS PER AC
 4. DESIGN VELOCITY: 4.0 FT/SEC
 5. DESIGN SLOPE: 0.01
 6. DESIGN FACTOR: 1.25



SPECIAL WATER QUALITY NOTES

1. LOCATION, SIZE AND NUMBER OF SWALES, SWALE BASINS, SWALES AND FILTER STRIP ARE APPROXIMATE. SIZES ARE DEPENDENT ON THE AMOUNT OF WATER QUALITY TREATMENT.
2. DEPENDS ON WATER QUALITY FACILITY SIZE, DURING FINAL DESIGN, SWALE SIZES LIST AREA CAN BE INCORPORATED INTO ADJACENT LOTS AND THEIR LAND USE.
3. THE WATER QUALITY BASIN, SWALES AND FILTER STRIP SHALL BE DEDICATED TO THE COUNTY WHEN COMPLETED AND MAINTAINED.
4. COUPLING ON OTHER DEPARTMENT APPROVED EQUIVALENT EMPS MAY BE SUBSTITUTED AS APPROPRIATE DURING FINAL DESIGN.
5. WATER QUALITY FACILITIES ASSOCIATED WITH SR 126 ARE PER SEPARATE PLAN BY OTHERS.

POST PROJECT DRAINAGE

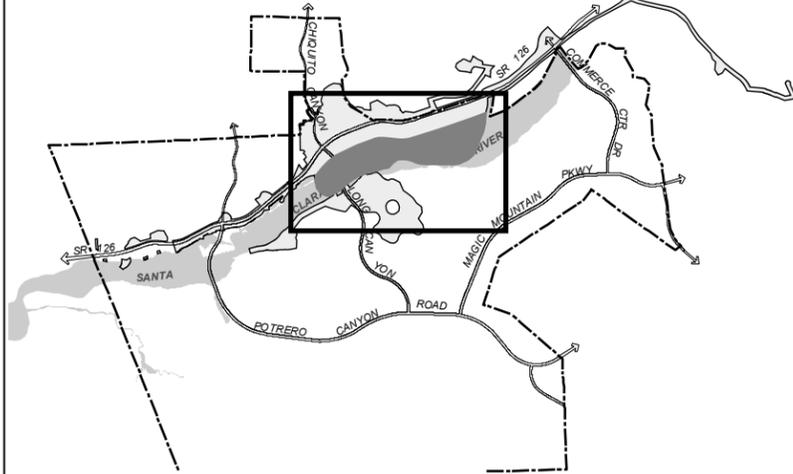
SUB-BASIN NUMBER	TIME OF CONCENTRATION (min)	HORIZONTAL SUB-BASIN				CUMULATIVE SUB-BASIN				SWALE CALCULATIONS FOR BMP DESIGN BY DRAINAGE AREA																								
		AREA (Ac)	Q ₁₀ (cfs)	Q ₅ (cfs)	Q ₂ (cfs)	AREA (Ac)	Q ₁₀ (cfs)	Q ₅ (cfs)	Q ₂ (cfs)	SW	h	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C ₉	C ₁₀	C ₁₁	C ₁₂	C ₁₃	C ₁₄	C ₁₅	C ₁₆	C ₁₇	C ₁₈	C ₁₉	C ₂₀			
RVC-1A	9	11.0	18	-	-	11.0	18.0	-	-	SW 6-1	0.31	0.10	0.03	0.19	4.8	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1B	18	3.0	3	-	-	3	3	-	-	SW 6-2	0.25	0.10	0.02	0.05	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1C	12	3.0	3	-	-	3	3	-	-	SW 6-3	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1D	14	3.0	3	-	-	3	3	-	-	SW 6-4	0.24	0.10	0.02	0.05	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1E	16	3.0	3	-	-	3	3	-	-	SW 6-5	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1F	12	3.0	3	-	-	3	3	-	-	SW 6-6	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1G	24	39.0	53	-	-	40	58	-	-	SW 6-7	0.23	0.10	0.04	0.15	8.3	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1H	23	7.0	12	-	-	49	71	-	-	SW 6-8	0.22	0.10	0.04	0.18	2.4	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1I	24	18.0	-	20	-	18.0	14.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1J	9	13.0	-	20	-	13.0	44.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1K	19	43.0	-	82	-	43.0	78.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1L	31	74.0	-	127	-	74.0	110.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1M	30	29.0	-	33	-	29.0	44.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1N	16	13.0	-	21	-	13.0	183.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1O	16	13.0	-	21	-	13.0	183.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

REFERENCES:

- THIS WAS CALCULATED BY SIKAND AND CAN BE FOUND IN THE NEARBY SPECIFIC PLAN.
- WATER HYDROLOGY AND DRAINAGE CONCEPT, DATED 04/26/09, APPROVED FOR REFERENCE.
- DESIGN GENERATED WITHIN THESE SUB-BASINS WILL BE COLLECTED IN EXISTING BASINS UPSTREAM OF SR 126 AND WILL ENTER THE RIVER VILLAGE DEVELOPMENT TO BE DESIGNED IN ACCORDANCE WITH THE NEARBY SPECIFIC WATER PLAN HYDROLOGY AND DRAINAGE CONCEPT - NORTHERLY SIDE DRAIN SYSTEMS PREPARED BY SIKAND AND DATED 06/28/09.
- EXISTING 50-YEAR FLOODPLAIN FOR DRAINAGE CONCEPT PLAN VTN NO. S3108 - EXISTING 50-YEAR FLOODPLAIN.
- EXISTING DEBRIS BASIN BY OTHERS.
- ENGINEERED SLOPES TO BE MAINTAINED AND MAINTAINED. BURNED CONDITION NOT APPLICABLE.

POST PROJECT DRAINAGE

SUB-BASIN NUMBER	TIME OF CONCENTRATION (min)	HORIZONTAL SUB-BASIN				CUMULATIVE SUB-BASIN				SWALE CALCULATIONS FOR BMP DESIGN BY DRAINAGE AREA																								
		AREA (Ac)	Q ₁₀ (cfs)	Q ₅ (cfs)	Q ₂ (cfs)	AREA (Ac)	Q ₁₀ (cfs)	Q ₅ (cfs)	Q ₂ (cfs)	SW	h	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C ₉	C ₁₀	C ₁₁	C ₁₂	C ₁₃	C ₁₄	C ₁₅	C ₁₆	C ₁₇	C ₁₈	C ₁₉	C ₂₀			
RVC-1A	9	11.0	18	-	-	11.0	18.0	-	-	SW 6-1	0.31	0.10	0.03	0.19	4.8	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1B	18	3.0	3	-	-	3	3	-	-	SW 6-2	0.25	0.10	0.02	0.05	0.3	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1C	12	3.0	3	-	-	3	3	-	-	SW 6-3	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1D	14	3.0	3	-	-	3	3	-	-	SW 6-4	0.24	0.10	0.02	0.05	0.2	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1E	16	3.0	3	-	-	3	3	-	-	SW 6-5	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1F	12	3.0	3	-	-	3	3	-	-	SW 6-6	0.24	0.10	0.02	0.05	0.1	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1G	24	39.0	53	-	-	40	58	-	-	SW 6-7	0.23	0.10	0.04	0.15	8.3	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1H	23	7.0	12	-	-	49	71	-	-	SW 6-8	0.22	0.10	0.04	0.18	2.4	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RVC-1I	24	18.0	-	20	-	18.0	14.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1J	9	13.0	-	20	-	13.0	44.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1K	19	43.0	-	82	-	43.0	78.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1L	31	74.0	-	127	-	74.0	110.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1M	30	29.0	-	33	-	29.0	44.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1N	16	13.0	-	21	-	13.0	183.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RVC-1O	16	13.0	-	21	-	13.0	183.0	-	-	N/A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



SOURCE: PSOMAS - September 2004

FIGURE 1.0-25

Landmark Village Drainage and Water Quality Plan

Project Design Features (PDFs) incorporated into the project to address water quality and hydrologic impacts include site design, source control, treatment control, and hydromodification control Best Management Practices (BMPs). As currently planned, stormwater runoff from all urban areas within the project will be routed to bioretention areas, vegetated swales, and/or extended detention basin treatment control BMPs. The extended detention basin, vegetated swales, and bioretention areas will be designed to operate off-line, receiving dry weather flows, small storm flows, and the initial portion of large storm flows from a low-flow diversion structure in the storm drain. Please refer to **Section 4.3, Water Quality**, of this EIR for detailed discussion of the water quality PDFs incorporated into the project drainage concept.

(I) Bank Stabilization

The approved Newhall Ranch Specific Plan contemplated installation of bank stabilization along portions of the Santa Clara River to protect development from flood hazards while preserving the river as a natural resource. The approved Specific Plan contained specific criteria to be followed by projects implementing the Specific Plan (see, Specific Plan [May 2003], Chapter 2, pp. 2-71 through 2-75). The environmental effects of the bank stabilization were analyzed in the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the tract map level as part of this EIR.

Consistent with the Specific Plan, the Landmark Village project proposes buried bank stabilization where necessary to protect against flooding and erosion pursuant to Federal Emergency Management Administration (FEMA) and Los Angeles County Department of Public Works' requirements. The bank stabilization is designed and would be constructed to retain the Santa Clara River's significant riparian vegetation and habitat, to allow the river to continue to function as a regional wildlife corridor, and to provide flood protection pursuant to Los Angeles County standards.

The location of the protection was illustrated earlier on **Figure 1.0-23**. As shown, the proposed buried bank stabilization extends along the Santa Clara River and Castaic Creek adjacent to and downstream of the tract map site. In total, approximately 18,600 linear feet (LF) of bank would be provided with bank stabilization. This would include approximately 11,000 LF fronting the southern boundary of the tract map site on the north bank of the Santa Clara River, and approximately 6,400 LF on the south bank of the river, beginning at the Long Canyon Road Bridge and extending both east and west.

The bank stabilization proposed downstream of Long Canyon Road Bridge is necessary to mitigate impacts associated with the Landmark project. An additional approximately 1,200 LF of soil cement bank stabilization is located downstream of the project site, and is designed to protect the approved WRP. The bank stabilization related to the WRP was approved and analyzed at a project-level with the Newhall Ranch EIR.

The project also includes the construction of buried bank stabilization between the Santa Clara River and the Old Road, north of the existing Valencia WRP. This bank stabilization was approved with the Santa Clara River Natural Management Plan (NRMP) and was analyzed within the certified Environmental Impact Report/Environmental Impact Statement (EIR/EIS) prepared for the NRMP.

Additionally, the project includes the installation of Turf Reinforcement Mat (TRM) or a similar bank stability protection along 6,600 LF of the utility corridor west of the Landmark Village tract map site. Finally, the project includes the installation of various stormwater outlet structures (**Figure 1.0-25a**, both within the tract map site and off site. The off-site outlet structures and energy dissipaters would be located at the outlet of Chiquito Canyon Creek, San Martinez Grande Creek, Long Canyon Creek, and other minor culverts across SR-126.

Figure 1.0-26, Bank Stabilization – Typical Cross-Section, depicts a typical cross-section for buried bank stabilization. As shown, the buried bank stabilization approach uses soil cement, which is buried beneath the existing banks of the river to resist future scouring. The following guidelines will be applied in selecting the proper protection system:

- Buried soil cement bank protection will be used in situations where the stream velocities are high or where there is the potential for lateral bank migration based on stream characteristics. Alternatively, buried ungrouted rip-rap will be used if in situ soils do not meet soil cement design requirements.
- If there is not sufficient space to allow covering of the revetment with the earthen fill because of physical constraints such as topographic features or existing facilities, then exposed ungrouted rock rip-rap will be used if the velocities do not exceed the limitations of the rock.
- Locations where there are proposed bridge crossings would require the banks underneath the bridge to have concrete gunite or soil cement slope protection.

As to buried bank stabilization, the soil placed on top of the bank stabilization is replanted with native vegetation to return the disturbed area to its natural condition upon completion of construction. Typically, the lining must be buried at least twice the height of the lining in order to resist scouring. Burying the toe of the lining requires temporary excavation and backfilling. A temporary construction zone of approximately 75 feet would occur at the base of the bank protection in order to bury the material. The original channel elevation would be restored after construction. The area would also be replanted with native vegetation.

Figure 1.0-27, Bank Stabilization Techniques, provides illustrations of exposed and buried bank stabilization techniques to be used on this project. This figure also depicts the relationship between the Santa Clara River, buried bank stabilization, and trail areas. The representative photographs used in this figure are taken from previously constructed projects located in the Valencia community, in which exposed and buried bank stabilization were used.

(m) Utility Corridor

The Utility Corridor consists of off-site and on-site utility infrastructure for the Landmark Village Project (please see **Figures 1.0-29, 1.0-30, and 1.0-32** for illustrative views of the potable water infrastructure, recycled water storage system, and wastewater/sewer plan). The corridor will provide new utilities as well as relocating existing facilities to serve the project. The utilities include a gravity sewer, pressure sewer force main, potable water, recycled water, agricultural water, electrical power, telephone, cable television, and natural gas.

The utility corridor alignment begins from the west at the proposed Newhall Ranch WRP) adjacent to the Los Angeles/Ventura County line. The corridor is generally located on the south side of SR-126 and extends easterly, crossing under Martinez Grande Creek, and Chiquito Canyon Creek, to the Landmark Village tract map site.

The utility corridor crosses Landmark Village through various routes including Long Canyon Road, "A" Street, Wolcott Way, on-site areas along the south of SR-126, and along the trail behind the Santa Clara River Bank Protection. From the Landmark Village tract map site, the gravity sewer, force main extends east by crossing under Castaic Creek south of SR-126. The potable and recycled water lines and agricultural water lines cross SR-126 to the north before crossing under Castaic Creek north of SR-126.

After crossing under Castaic Creek, the utilities continue easterly in either Hancock Parkway on the north side of SR-126 or along the South Side of SR-126 adjacent to Travel Village until they meet the intersection of Commerce Center Drive and Henry Mayo Drive at the east end of Travel Village. The utility corridor then extends easterly along Henry Mayo Drive to The Old Road. It then continues south in The Old Road and terminates at the existing Valencia Water Reclamation Plant #32 near the intersection with Rye Canyon Road. At this point the recycled water main continues south and east along the north bank of the Santa Clara River until it turns uphill (north) and connects to the existing Round Mountain potable water tank which will be converted to recycled water as part of this project.

Franklin Parkway and Wolcott Way is also used for utility service to Landmark Village. Electric power, telephone, cable television, and water are brought across SR-126 to the Landmark Village project from the existing terminus of these utilities near the post office site approximately 3,500 feet east of Wolcott Way.

Various utilities, including potable water, recycled water, well and pipeline, gravity sewer, gas, electrical power, telephone, and cable television also extend from the utility corridor north across SR-126 at Chiquito Canyon Road and at San Martinez Grande Canyon Road.

(n) Potable Water

The Landmark Village project-level potable and recycled water plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Water Plan (Specific Plan Exhibit 2.5-2). This plan sets forth on-site storage and water distribution systems to provide adequate water service to the entire Specific Plan site. The Specific Plan also committed to the provision of recycled water, to the extent available, for irrigation use. **Figure 1.0-28** depicts the Specific Plan's Conceptual Backbone Water Plan, as it relates to the Landmark Village project.

The Valencia Water Company would be the retail water company providing potable water to the project site.

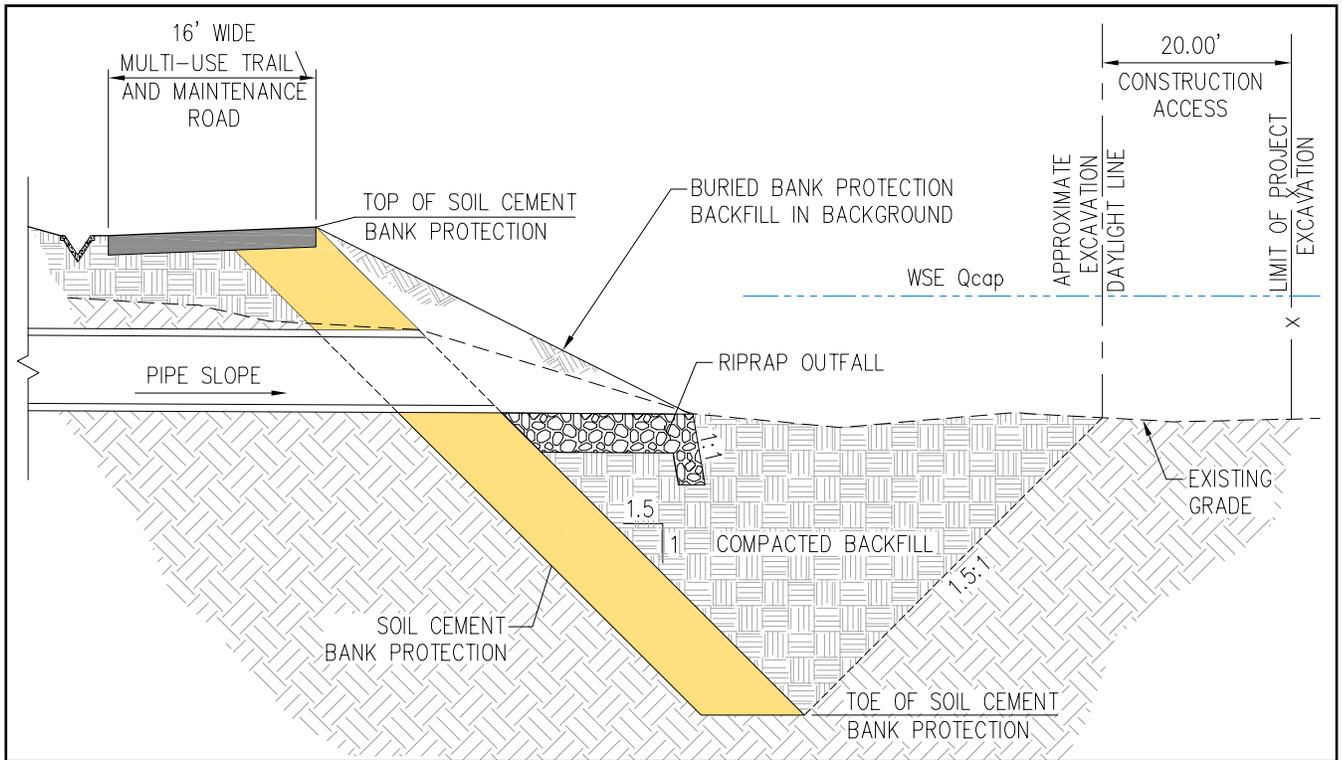
As shown on **Figure 1.0-29, Landmark Village Potable Water System Infrastructure**, the proposed water delivery system consists of one new water tank and three pressure regulating stations connected to a network of 18- to 20-inch water mains that generally follow the southern right-of-way for SR-126 and major roadways. A network of 8-inch lines located within the planned roadway network would distribute the water for connection to laterals located on individual lots.

A single water pressure zone (Zone 1A) overlies the project site, and is supplied potable water via the three pressure regulating stations from Zone 1 that will provide all the potable water supply for the system serving Zone 1A, which contains the proposed Landmark Village VTTM No. 53108. Pressure Zone 1 serves uses at an elevation of less than 1,160 feet above mean sea level (MSL) and is comprised of three storage tanks with a combined storage capacity of 8.3 million gallons and numerous sources of supply consisting of existing groundwater wells and CLWA turnouts.

Potable water demands for Landmark Village will be met by using groundwater produced from the Alluvial aquifer from newly constructed replacement wells located within the Valencia Commerce Center that have been approved and permitted by the California DHS. These wells replaced older wells used for irrigation that are no longer active having been permanently closed as directed by DHS. In August 2004, Valencia received an amended water supply permit from DHS for approval and construction of four domestic water supply wells. Two of the four replacement wells are needed for the project and will operate by delivering water to Zone 1 and then regulated into Zone 1A to meet the demands of the project. The additional wells will be used to meet future needs demands when needed.



Storm Drain Outlet



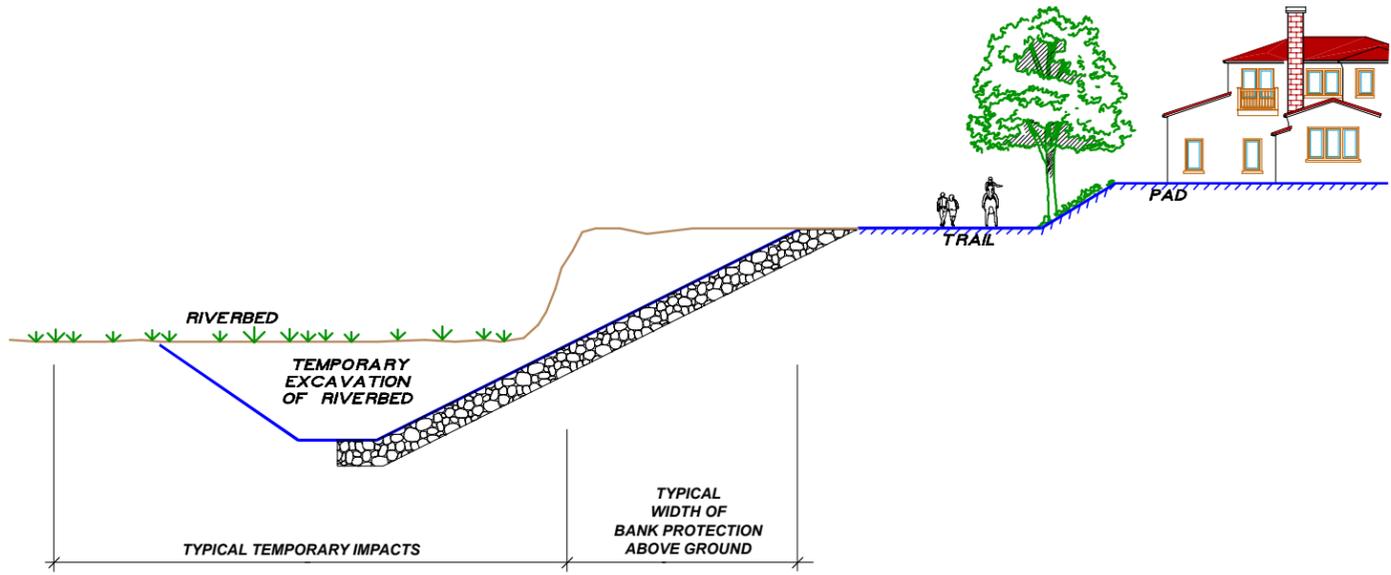
Typical Storm Drain Outlet Model

SOURCE: Newhall Ranch RMDP - February 2007.

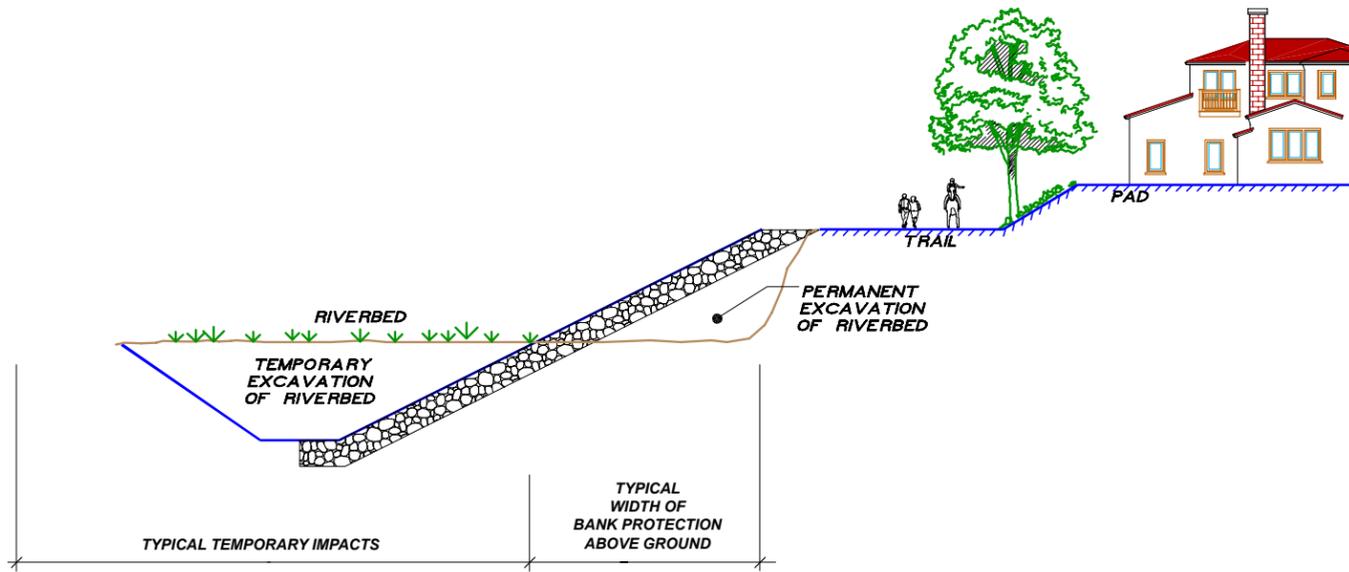
FIGURE 1.0-25a

Typical Storm Drain Outlet

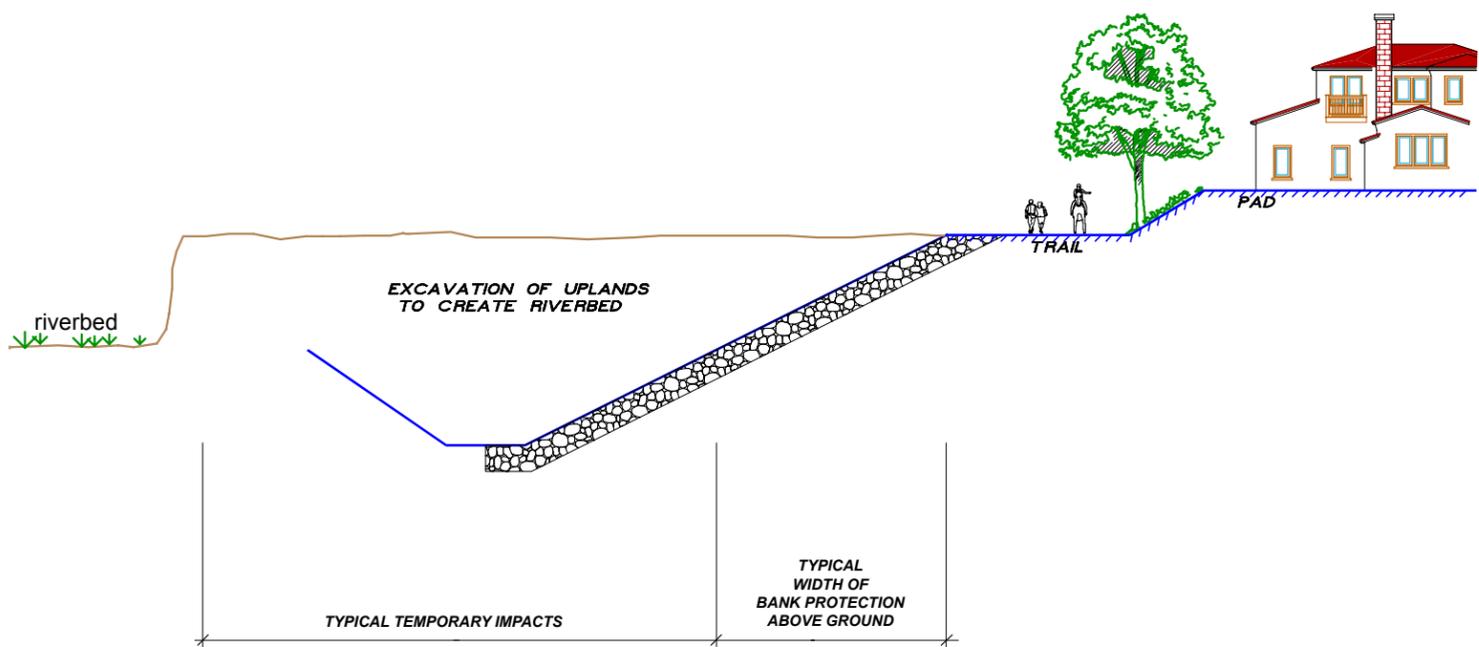




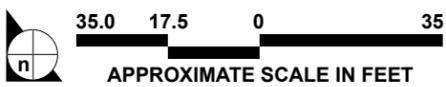
Section A
No Permanent Loss of Riverbed, Only Temporary Impacts



Section B
Permanent Loss of Riverbed and Temporary Impacts



Section C
No Permanent Loss of Riverbed and No Temporary Impacts



SOURCE: FORMA – March 2002

FIGURE 1.0-26



Stabilization at San Francisquito Creek
at the West Bank
(This photo depicts exposed
bridge abutment)

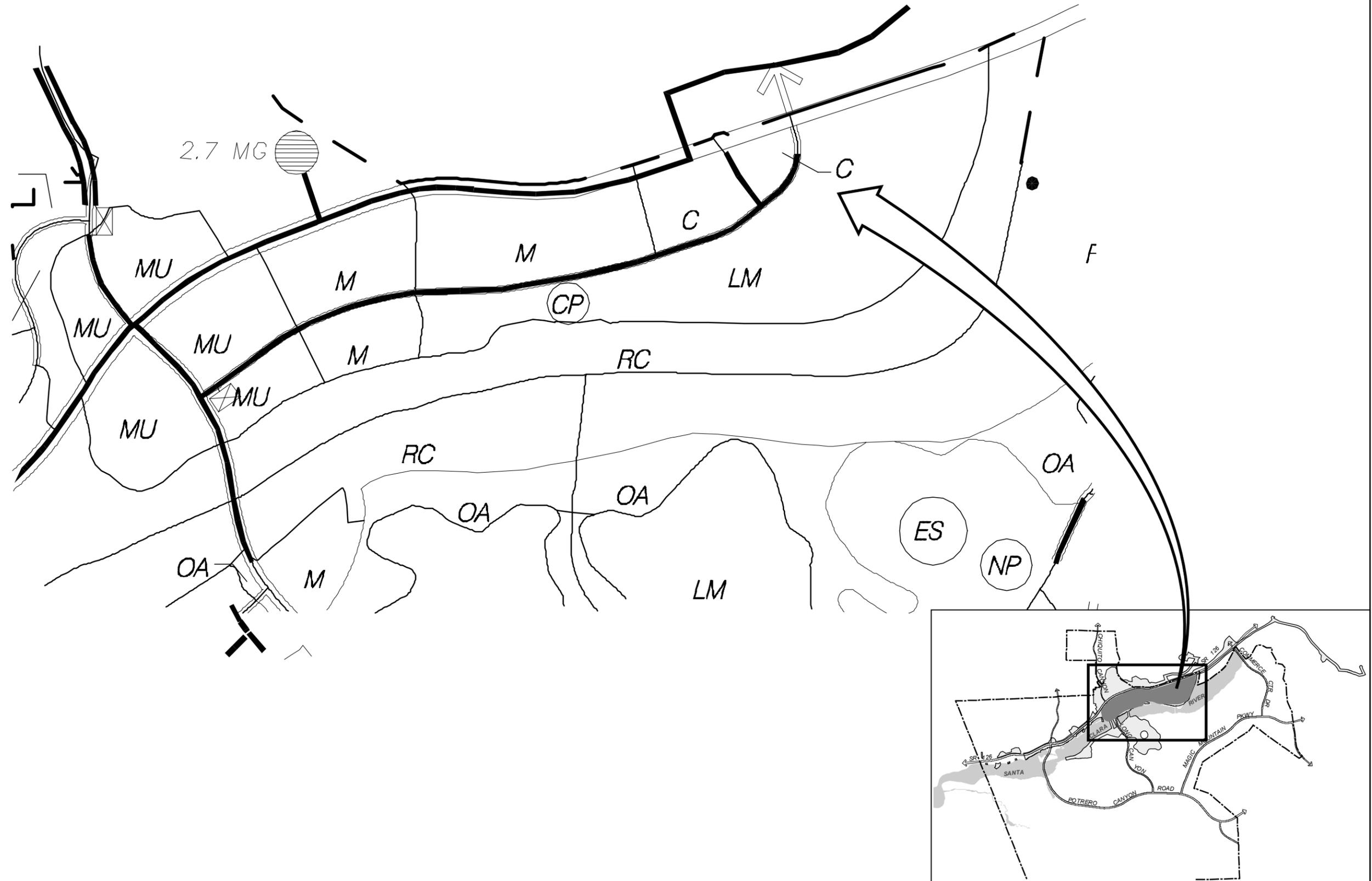


Stabilization at Bridgeport
(This photo depicts
Buried Bank stabilization)

SOURCE: PSOMAS – 2003

FIGURE **1.0-27**

Bank Stabilization Techniques



Legend:

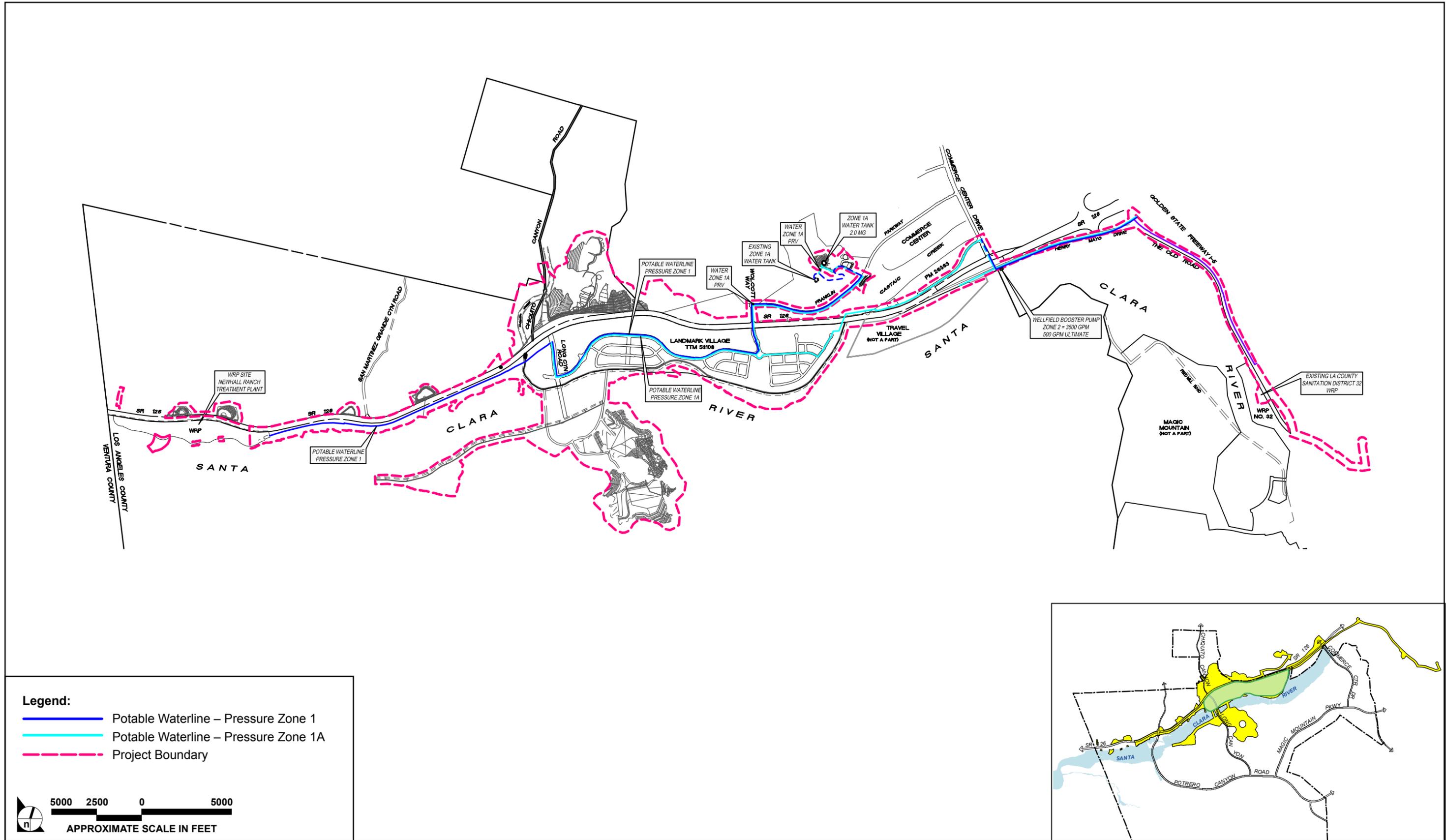
-  WATER TANK SITE (POTABLE AND/OR RECLAIMED)
-  PUMP STATION
-  PRESSURE REDUCTION STATION
-  POTENTIAL AQUIFER STORAGE AND RECOVERY WELLS (ASR)
-  WATER AND/OR RECLAIMED WATER LINES
-  WATER RECLAMATION PLANT

 NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-28

Landmark Village Portion of Specific Plan – Conceptual Backbone Water Plan



SOURCE: PSOMAS – November 2008

FIGURE 1.0-29

Landmark Village Potable Water System Infrastructure

Zone 1A will require construction of a new potable water tank. This new potable water tank would be constructed near an existing water tank located in the Valencia Commerce Center, but at a slightly lower elevation. A 20-inch potable water line located within an approximately 3.5-foot-wide by 5-foot-deep trench would extend approximately 5,600 lineal feet from the tank site along the existing Franklin Parkway and Wolcott Road alignments, crossing SR-126 and into the proposed subdivision. This main would also extend to the Newhall Ranch WRP adjacent to the south SR-126 right-of-way from the west side of the tract map site. Construction is estimated to last 3 to 4 months.

The new potable water tank would consist of an aboveground welded steel tank supported by a reinforced concrete ring footing, with a storage capacity of 2.0 million gallons. The new tank would be designed and constructed to meet American Water Works Association (AWWA), National Sanitary Foundation (NSF), and other industry standards for domestic water storage. With the new water tank, a total of 10.3 million gallons of storage capacity would be available to meet the emergency and fire-flow storage capacity requirements necessary to support the project upon completion. The proposed Zone 1A water system consisting of one tank and three pressure regulating stations from Zone 1 provide redundant sources of supply and storage to enhance the system's reliability, safety, and efficiency.

Project improvements also include abandonment and relocation of existing agricultural wells used to irrigate cultivated fields on the project site and on other portions of Newhall Ranch. These existing wells and associated piping would be relocated or properly abandoned, as necessary, to continue to meet ongoing agricultural needs elsewhere on Newhall Ranch.

The Landmark Village Project proposes to use recycled water for landscape irrigation purposes and other allowable uses. The proposed delivery system for recycled (non-potable) water is illustrated on **Figure 1.0-30, Preliminary Recycled Water Storage System**. Currently, recycled water is only available at the Valencia WRP along the Old Road east of the project. Concurrent with buildout of the project recycled water will become available from the Newhall Ranch WRP west of the project. To supply recycled water to Landmark Village and provide for a backbone system to serve other areas of Newhall Ranch, a recycled piping system will be constructed from the proposed Newhall Ranch WRP through the Landmark Village project to the existing Valencia WRP. This pipeline would be constructed starting from the west along the utility corridor south of the SR-126 right-of-way approximately 7,800 feet to the proposed subdivision. The line will pass through the subdivision approximately 11,000 feet along the future spine road alignment. From the east tract map boundary, the recycled waterline will extend north under SR-126, then east crossing under Castaic Creek, through Hancock Parkway to Commerce Center Drive. It would continue south to Henry Mayo Drive and east to The Old Road. This portion of the recycled waterline would measure approximately 10,000 linear feet. At the point where Henry Mayo Drive merges with The Old Road, the line would then head south along the western right-of-way of The

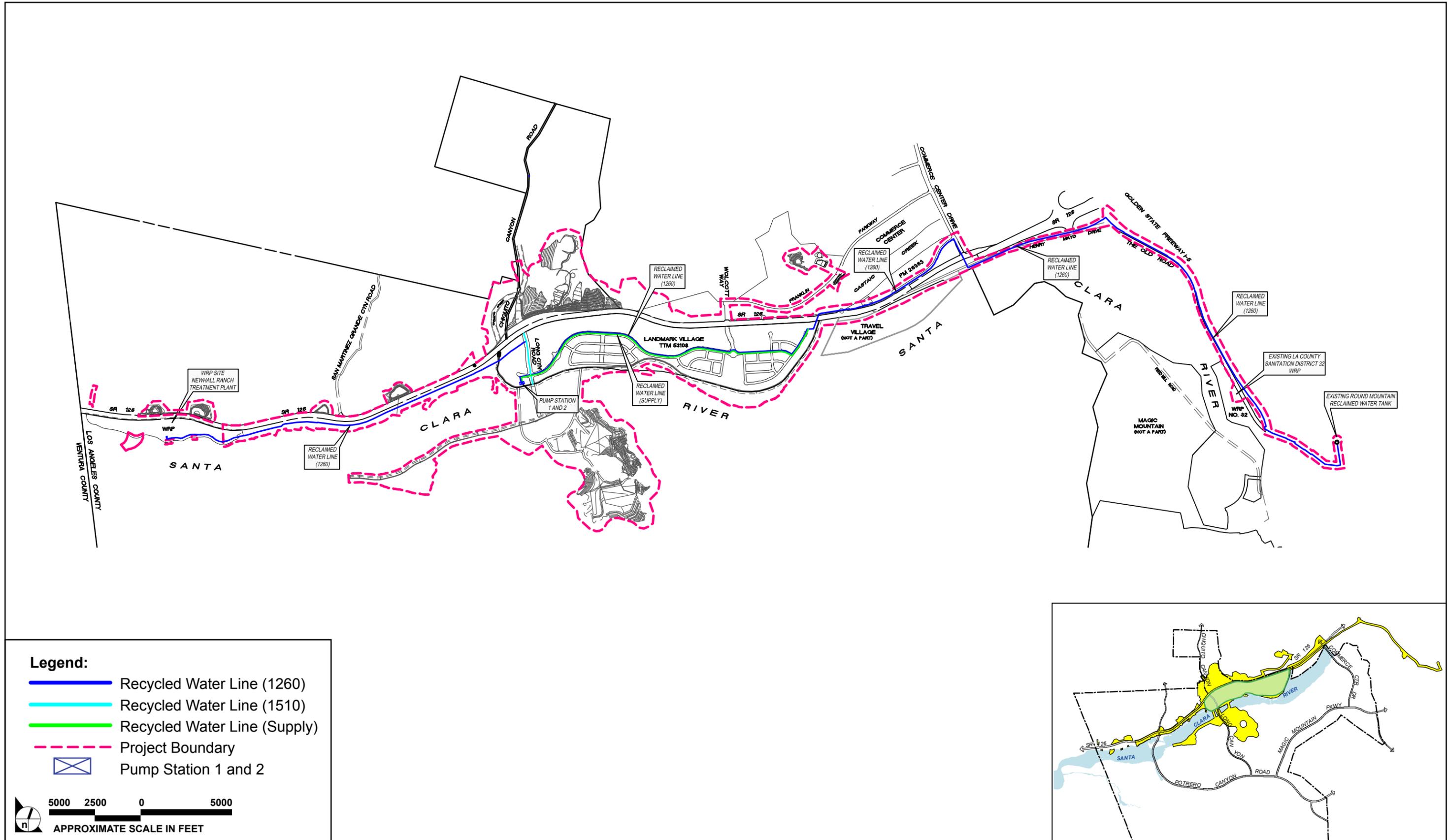
Old Road where it would connect to the existing Valencia WRP. This southerly section is approximately 8,000 feet. Construction of the recycled waterlines would take approximately 12 months. The recycled water system would be pressurized through the existing pump station at the Valencia WRP or through the proposed pump station at the Newhall Ranch WRP.

Storage would be required for the recycled water system. Approximately 500,000 gallons of storage would be provided at the Newhall Ranch WRP as a fore bay for the pump station. Additional operational storage would be required and this storage is currently proposed to be provided by converting the 3.3 million gallon Round Mountain Tank, which is currently being used for potable water, into a recycled water tank. Recycled water would be delivered to this tank through the pipeline that is connected to the Valencia WRP. To utilize this tank, a pipe would be extended southward in The Old Road and then follow the Santa Clarita trails system eastward to connect to the existing Round Mountain Water Tank. Initially, recycled water for Landmark Village could be provided from the Valencia WRP until the Newhall Ranch WRP is operational.

(o) Agricultural Water Line

The agricultural line would begin from the east border of the Landmark Village tract map site and cross SR-126 to the north, then east under Castaic Creek. It will run through the PM26363 project in the parking lot until it crosses Commerce Center Drive. It then runs southerly along Commerce Center Drive until it crosses SR-126 and Henry Mayo Drive and connects to existing wells south of SR-126 and north of the Santa Clara River. The line is expected to be in a 4-foot wide by 6-foot deep trench extending 6,500 LF. Cut/fill quantities are estimated to be 7,000 cubic yards. Construction is expected to take approximately 6 months.

The agricultural water line would continue at the east border of the Landmark Village tract map site near Castaic Creek. The line would extend through the tract map site approximately 11,000 LF west along the southern border of the proposed site behind the soil cement liner within the trail. From the west edge of the tract map site, the line would extend approximately 7,800 linear feet within the utility corridor to the Newhall Ranch WRP. The line would continue west along the southern border of the WRP site behind the soil cement liner within the trail to the Ventura County/Los Angeles County border. At this point the agricultural water line ties into the existing line on the south side of SR-126. The line is expected to be in a 4-foot-wide by 6-foot-deep trench with cut/fill quantities estimated to be 23,200 cubic yards. Construction is estimated to take approximately 6 to 8 months.



SOURCE: PSOMAS – November 2008

FIGURE 1.0-30

Preliminary Recycled Water Storage System

(p) Wastewater

The Landmark Village wastewater/sewer plan is consistent with, and implements, the Specific Plan's approved Conceptual Backbone Sewer Plan (Exhibit 2.5-3). This plan set forth a system for wastewater/sewage collection for the entire Specific Plan site. The Specific Plan also committed that all sewer system facilities would be designed and constructed for maintenance by the County, the County Sanitation Districts of Los Angeles County (CSDLAC), or a new County sanitation district in accordance with their manuals, criteria and requirements. **Figure 1.0-31** depicts the Specific Plan's Conceptual Backbone Sewer Plan, as it relates to the Landmark Village project site.

Figure 1.0-32, Landmark Village Wastewater/Sewer Plan, illustrates the precise routing of sewer lines and the delivery system to serve the Landmark Village project site. The plan provides the tract map level of detail required to provide adequate sewer service to the project site, consistent with the Specific Plan.

The project-level wastewater/sewer collection system consists of gravity sewers, forced mains, and pump station. The long-range plan is for the Newhall Ranch WRP to be constructed exclusively to serve uses within the Specific Plan area. The WRP's capacity is 6.8 mgd, with a maximum flow of 13.8 mgd. A new County sanitation district was formed in 2006. The environmental effects of constructing and operating the WRP were evaluated at the project-level in the certified Newhall Ranch Specific Plan Program EIR. In the interim, several options are available to treat wastewater generated by the proposed project. One option is to construct an initial phase of the Newhall Ranch WRP to serve this subdivision, with buildout of the WRP occurring over time as demand for treatment increases. Under this approach, a network of 8-inch wastewater collectors would convey effluent to an 18-inch sanitary wastewater interceptor line. This interceptor line would be placed in a 7.5-foot-wide by 15-foot-deep (average depth) trench found south of the SR-126 right-of-way within the utility corridor. It will begin near the intersection of the Old Road and Henry Mayo Drive and extend west approximately 26,000 LF where it would connect to the headworks of the Newhall Ranch WRP. The Newhall Ranch WRP is designed to meet Los Angeles County Department of Public Works, CSDLAC, and state standards and requirements. The construction period is estimated to take approximately 6-8 months.

The second option is to construct a pump station on the Landmark Village project site where wastewater would be pumped back to the existing Valencia WRP (District No. 32), located upstream of the project along I-5, until such time as the first phase of the Newhall Ranch WRP is constructed. Under this approach, a sanitary sewer force main line would be placed in a 3-foot-wide by 4.5-foot-deep trench from the tract map site easterly approximately 18,000 LF to the existing CSDLAC lift station near the intersection of the Old Road and Henry Mayo Drive. The existing lift station will convey wastewater to the District 32 WRP. The alignment of the force main will be parallel with the alignment of the gravity

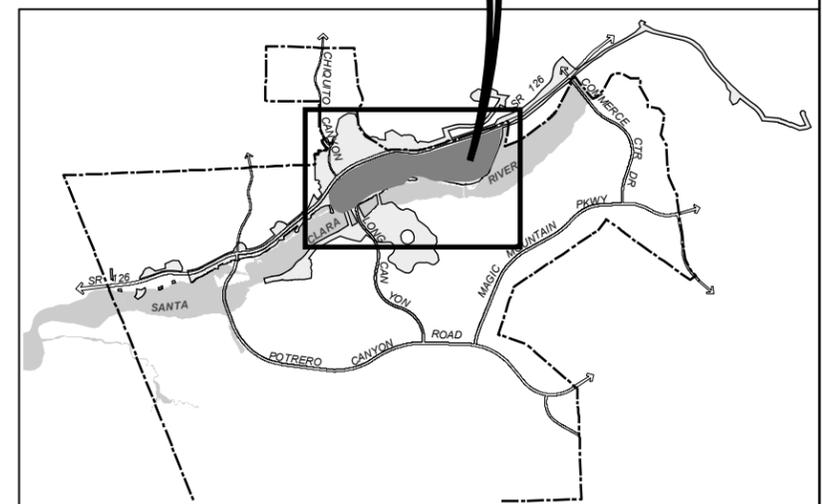
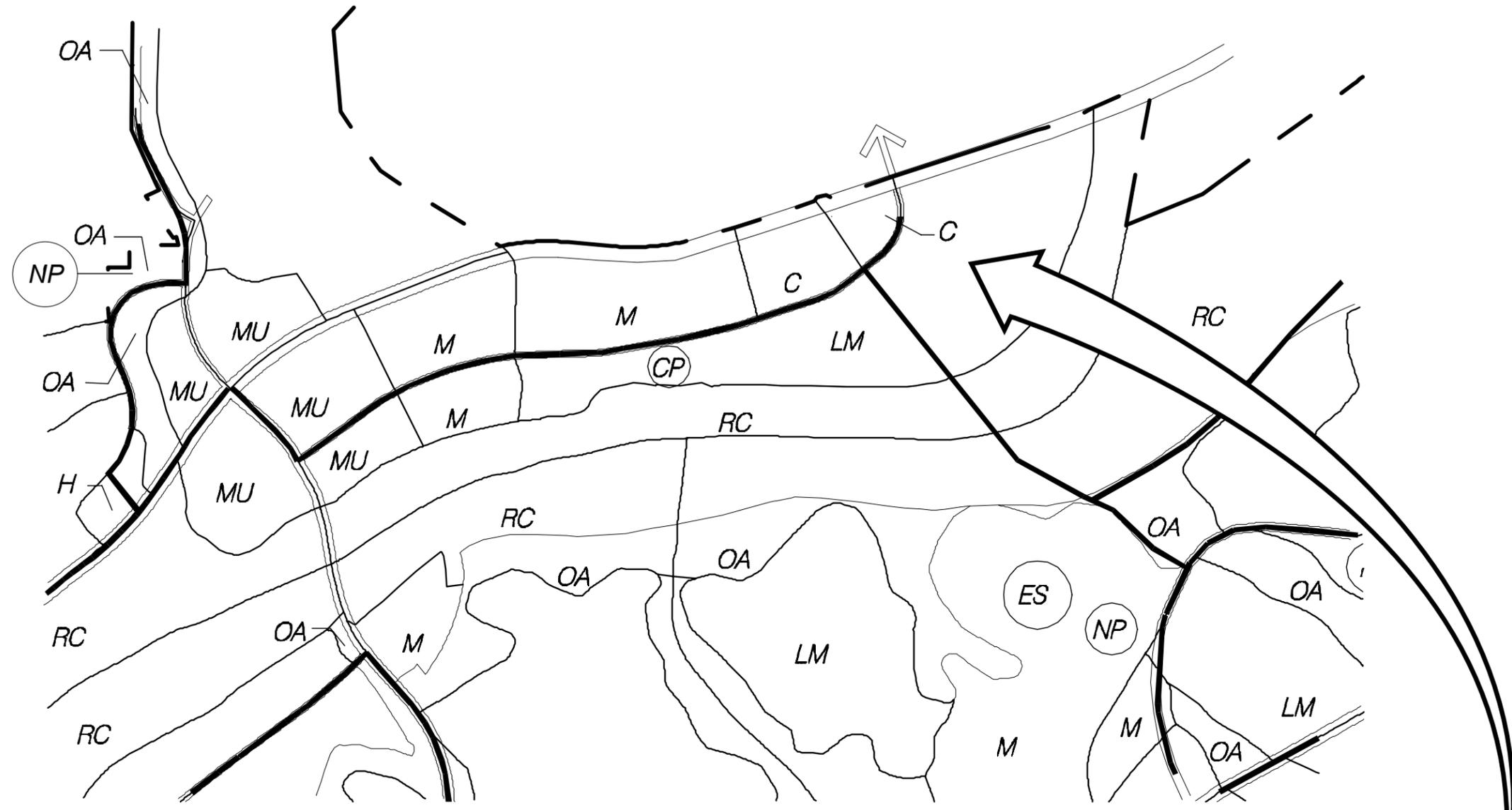
interceptor sewer. Off-site wastewater improvements would be completed in one phase over a 6- to 12-month period.

The selection of one of the options will be made during final design and prior to construction. Please refer to **Section 4.11, Wastewater Disposal**, of this EIR for a detailed discussion of the wastewater collection and conveyance system.

(q) Electrical/Dry Utilities

Electrical utilities to serve the proposed project would be constructed in two phases. The first phase would relocate the existing 66 kilovolt (kV)/16kV overhead electric power line running parallel to SR-126. New power lines would be constructed from The Old Road west beneath the existing Castaic Creek Bridge to approximately 300 feet west of the Commerce Center Drive and Harrison Parkway intersection within an existing Southern California Edison (SCE) easement. The second phase would construct new transmission lines continuing west along the existing SCE easement approximately 12,000 LF crossing the Chiquita Canyon Landfill, Chiquito Canyon Road, and Chiquito Canyon Creek. An interim 66kV/16kV overhead line will continue southerly approximately 1,200 LF along the west side of Chiquito Creek and tie in to the existing electric lines approximately 700 feet north of SR-126. The existing 66KV/16KV overhead line would be relocated to the north as described above prior to the grading activities on the north side of SR-126. To serve the project, a new 16kV line would then be constructed westerly along Franklin Parkway and placed under ground from the point of connection near the water tank access road. From the point of connection, electric lines would be placed in a joint trench extending west approximately 3,500 feet to Wolcott Way, then south approximately 700 feet across SR-126 into the tract map site. Within the tract map site, electric lines would be placed in a joint trench extending west approximately 8,000 feet along A Street to Long Canyon Road and extend north across SR-126 to connect to the existing 66KV/16KV overhead line. This would be the primary electric service for the tract map site.

Construction is anticipated to be completed in six to eight months.



Note: The Regional Planning Commission recommended approval of the proposed project, along with a change to the configuration of the elementary school/community park. The proposed modified configuration is shown on Figures 1.0-17 and 1.0-18, consistent with the Commission's recommendation.

LEGEND

-  SEWER LINE SYSTEM
-  PROPOSED WATER RECLAMATION PLANT

 NOT TO SCALE

SOURCE: River Village Planning Notebook – August 2003

FIGURE 1.0-31

Landmark Village Portion of Specific Plan – Conceptual Backbone Sewer Plan

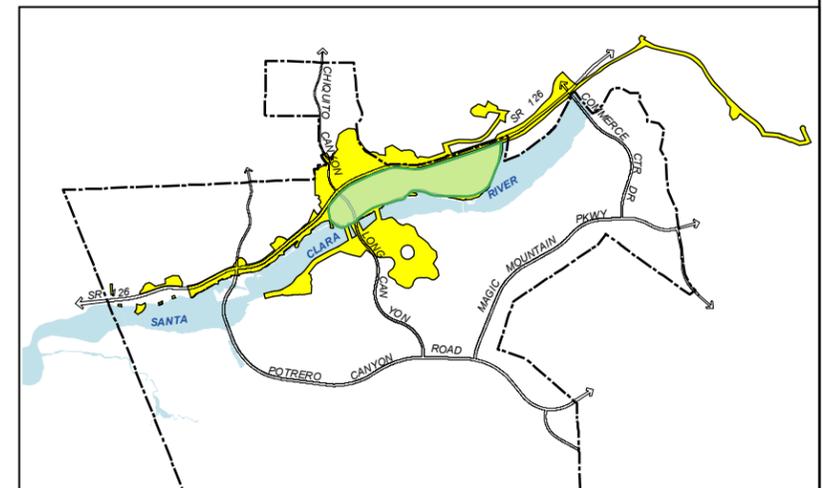
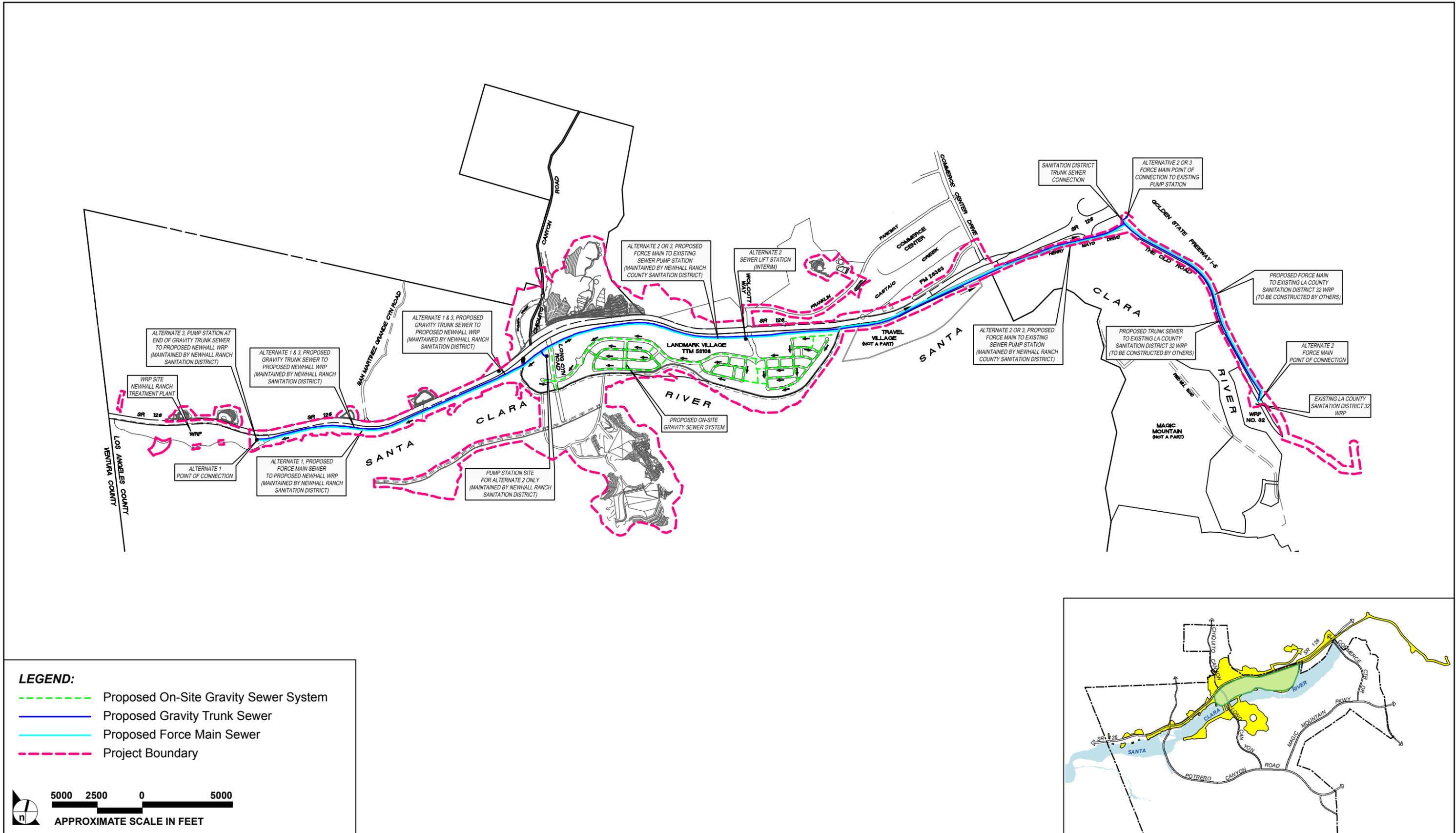


FIGURE 1.0-32

Landmark Village Wastewater/Sewer Plan

(r) Natural Gas

A natural gas distribution main would be constructed in two phases to serve the tract map site. Currently, there is an existing 6-inch gas main within the SR-126 southerly right of way from The Old Road to Chiquito Canyon Road. In the first phase, an 8-inch main will be connected to the existing 8-inch main at the east end of the tract boundary adjacent to the Castaic Creek Bridge. The proposed 8-inch main will extend south from the existing main into Landmark, then extend westerly approximately 11,000 LF through the project site along the future "A" Street. The main then turns north at Long Canyon Road, then continues west within the utility corridor south of the SR-126 right-of-way an additional 7,800 LF to the proposed Newhall Ranch WRP. The 8-inch gas main would be placed in a 3-foot-wide by 5-foot-deep trench. The estimated construction date is 2010, with a projected installation time of 8 to 10 months.

The second phase of the gas distribution main would travel east of the tract map site along the north SR-126 right-of-way to Commerce Center Drive where it crosses SR-126 and continues east along the south Henry Mayo Drive right-of-way ultimately connecting to the existing gas main on The Old Road. The second phase is estimated to measure approximate 9,800 LF. The trench would be approximately 3-foot-wide by 5-foot-deep with an estimated construction period of approximately four to six months.

Franklin Parkway provides an alternate alignment to provide gas service to the project site. With this option, an 8-inch gas main will be constructed within the right of way of Franklin Parkway connecting to the terminus of an existing gas main near the U.S. Post Office site. The proposed main will extend westerly on Franklin Parkway, then southerly on Wolcott Way under SR-126 into the project site.

(s) Grading

Off-site grading is required at several locations in order to construct the tract map site. In addition to the Adobe Canyon borrow site that will be excavated for soil needed to elevate the tract map site from the floodplain, the proposed project requires off-site grading in Chiquito Canyon for improvements to SR 126, construction of debris basins, off-site water tank and wastewater treatment facilities that would be connected to the tract map site by utility lines in the utility corridor that will also require grading. Any existing utilities/pipelines/structures would be relocated, removed or abandoned in place in conjunction with the grading of the utility corridor. **Figure 1.0-33, Off-Site Improvements**, depicts the off-site grading locations, the haul routes, the location of the proposed river crossing, the utility corridor, and the water tank locations. Earthwork associated with these off-site improvements is described below.

Project-related grading would require the movement of approximately 4.2 million cubic yards of removal and recompaction of existing material, and up to 5.8 million cubic yards of import from the off-site Adobe

Canyon borrow site within the approved Specific Plan boundary to meet the flood-control requirements of the tract map site. The project grading is consistent with, and implements, the Specific Plan's approved Conceptual Grading Plan (Specific Plan Exhibit 2.7-1), and the applicable Specific Plan Design Guidelines (Specific Plan Chapter 4, Section 4.8) for grading and hillside management. In addition, the environmental effects of grading the entire Specific Plan site were evaluated as part of the certified Newhall Ranch Specific Plan Program EIR, but are further analyzed at the project level in this EIR.

The off-site grading would excavate and reshape the hills and depressions forming the ridge separating Long and Adobe Canyons. Much of this work would occur along the top and bluffs of an unnamed plateau located just west of Sawtooth Ridge. This plateau ranges in elevation from a low of 1,130 feet at its northern most point to a high of 1,220 feet in the southeast, which is characterized by an increasingly steeper grade. The proposed grading would excavate the southeastern portion of this plateau creating a gentler slope leading up to the top of the ridge. All grading activities would be conducted in a manner as to not disturb any of the soil within 300 feet of the spineflower area as recommended by a comment received on the Draft EIR. The resultant manufactured slope angle would range from 5:1 to 2:1 (horizontal/vertical). The grading would also alter the western facing slope leading up to the plateau creating a bench separated by two manufactured slopes stepping down the west facing ridgeline defining Adobe Canyon at a 3:1 grade. Additional earthwork is planned at the terminus of Adobe Canyon where a series of excavations would result in a manufactured slope approximately 100 feet in height at relatively uniform 3:1 grade. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Up to approximately 5.8 million cubic yards of earth may be excavated from the Long Canyon/Adobe Canyon area and transported across the Santa Clara River to the tract map and project sites, using existing at-grade agricultural crossings as the haul route. It is expected that excavation and transport activities will take approximately 10 months time.

The second off-site grading site (Chiquito Canyon grading site) is located just north of SR-126 and east of the intersection with Chiquito Canyon Road. The Chiquito Canyon grading site is proposed on the ridgeline of a northeast-southwest trending hillside. The terrain on the southwesterly portion of the ridgeline gently slopes toward the intersection in a "finger" shape where elevations reach approximately 950 feet above msl at its low point (slightly elevated above the roadbed). The terrain becomes progressively steeper and more rugged toward the northwest portion of the ridge, with the peak elevation reaching 1,160 feet above msl. The grading would lower the "finger" of land extending toward the intersection of Chiquito Canyon Road with SR-126 by approximately 60 feet when compared to the existing elevation. Rather than a gradual incline that extends upward at increasingly greater grade, the reshaped slope would approximate the grade of SR-126 for about 1,500 feet west of the intersection with Chiquito Canyon Road. At this point, the grading would create a manufactured slope that extends

upward at a uniform 3:1 grade reaching a high of 1,160 feet above msl. A series of benches, swales and debris basins would also be constructed to collect, convey and release runoff in a controlled manner. Approximately 1.2 million cubic yards of earth would be excavated from this area and placed as fill in the adjacent canyons or transported to stockpiled for the project and/or tract map sites.

Upon completion of the grading operations associated with soil import, additional work would be needed for mass grading of the development areas, along with fine grading for development pads. Mass grading would consist of rough grading operations for major roads and infrastructure, drainage patterns and building pads for the various land uses within the tract map site. Remedial grading and custom grading may also be required depending upon future site-specific soils and geological investigations.¹³ Graded slopes would be landscaped and irrigated pursuant to County grading and erosion control requirements.

Utility installation involves earthwork such as excavation of trenches and stockpiling of soils. Earthwork volume estimates for each of the utilities are provided below:

- Up to 182,000 cubic yards for the potable water system;
- Up to 800,000 cubic yards for the sanitary sewer system;
- Up to 50,000 cubic yards for installation of dry utilities including electrical and natural gas;
- Up to 92,000 cubic yards for construction of the debris basins; and
- Up to 88,000 cubic yards for the Zone 1A water tank site.

The total volume of earthwork, inclusive of the utility corridor, is estimated at up to 7 million cubic yards.

The project-related grading also may occur in several phases, including partial grading within the tract map site prior to the transport of off-site materials from Adobe Canyon. This phased grading may include removal and re-compaction of existing soils within the tract map site without any substantial changes in existing elevations and/or removal of soils within certain areas and compaction of these soils at a higher elevation in another location within the tract map site creating a temporary low area to be filled at a later date with imported materials. Both the elevated compacted and low areas created by this phased grading must be protected from flooding in accordance with current County standards. Flood protection may include permanent buried bank stabilization or a temporary coating such as gunite or turf reinforced mat.

¹³ Geotechnical conditions requiring remediation may include settlement and seismic conditions. Please refer to **Section 4.1, Geotechnical and Soil Resources**, of this EIR for a detailed discussion of potential grading impacts and related mitigation.

As part of the grading within the first phase of the tract map, a temporary, emergency vehicle access road would be installed for use by the Los Angeles County Fire Department. The temporary road would be gated and allow access to and from SR-126 on the northwest side of the tract map site, connecting to the east end of "X" Drive and is depicted on Figure 1.0-23.

(t) Sound Walls

The applicant proposes to construct sound walls of varying heights within the Landmark Village tract map site along SR-126. The locations and heights of these walls are described and illustrated in **Section 4.8, Noise**, of this EIR.

(2) Economic Characteristics

(a) Fiscal Considerations

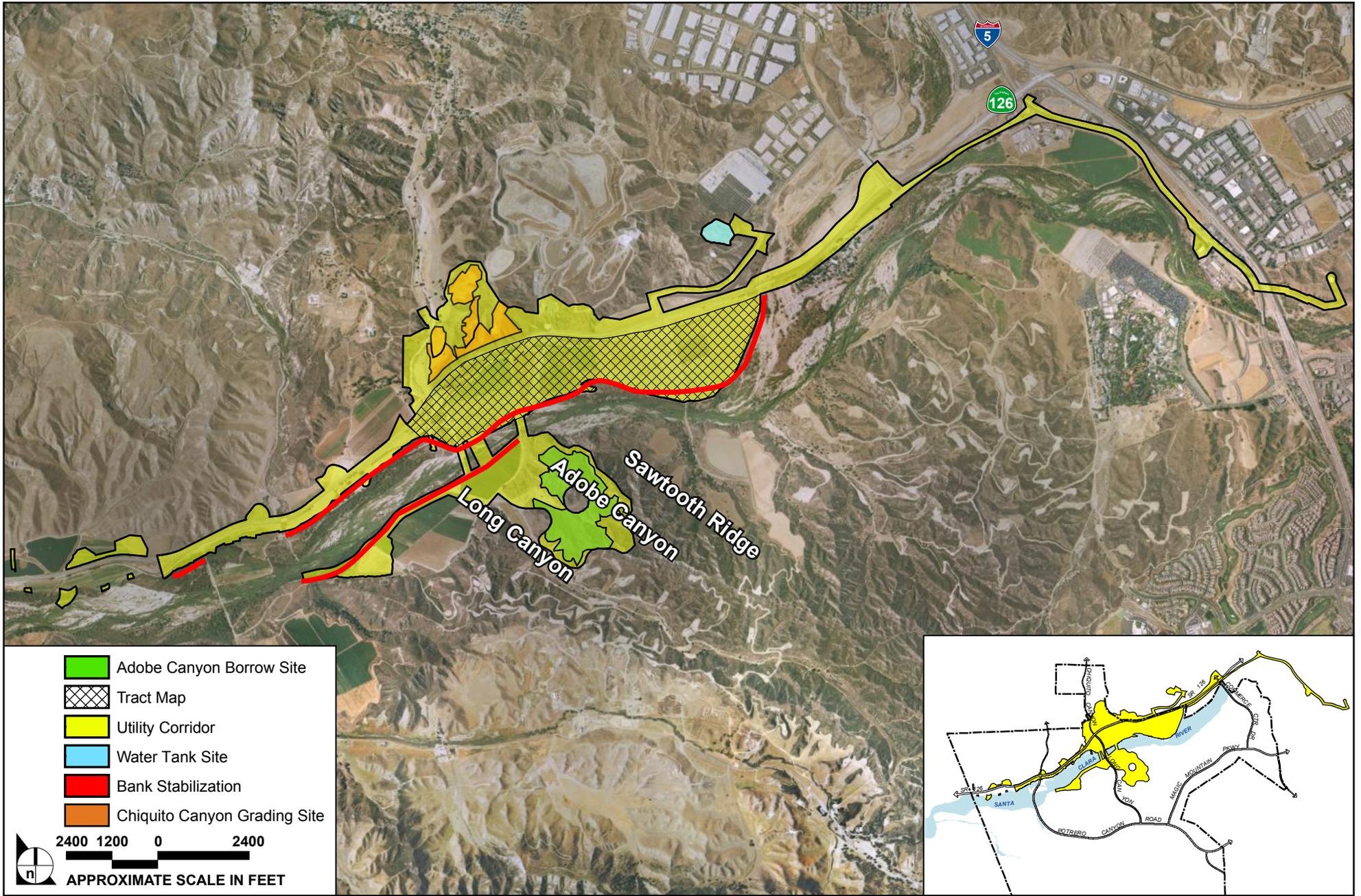
The Specific Plan included a fiscal impact analysis, which showed that implementation of Newhall Ranch would result in a favorable fiscal impact on Los Angeles County and the City of Santa Clarita. After funding all essential local governmental services, annual surpluses were projected to both the County and City.¹⁴ In addition, the Specific Plan analyzed the population, housing, and employment effects of the Specific Plan on the local and regional environment. As approved, the Specific Plan was found to be consistent with the population, housing, and employment projections of the County of Los Angeles General Plan and the Santa Clarita Valley Area Plan. In addition, the approved Specific Plan was found to be consistent with the Southern California Association of Governments' (SCAG) adopted population, housing, and employment forecasts for the Santa Clarita Valley and the region.¹⁵

(b) Public Services

Using data provided by the County of Los Angeles, Department of Regional Planning, the average household size is as follows: single-family units (308), 3.17 persons per household, and multi-family units (1,136), 2.38 persons per household. Therefore, the residential component of the Landmark Village project would result in a previously planned and approved population of approximately 3,680 persons ($308 \times 3.17 = 976$; $1,136 \times 2.38 = 2,704$; $976 + 2,704 = 3,680$).

¹⁴ For further information, please refer to Section 6.0, Fiscal Impacts, of the Newhall Ranch Specific Plan Program EIR and the related fiscal impacts study (**Appendix 6.0**).

¹⁵ For further information, please refer to Section 4.21, Population, Housing, and Employment, of the Newhall Ranch Program EIR.



SOURCE: Impact Sciences, Inc. – February 2006

FIGURE 1.0-33

Off-Site Improvements

The County of Los Angeles would provide public services to the project site. This would include police and fire service, flood control, library, public park and trails maintenance and wastewater service. However, approval of such services to the entire Specific Plan site was considered by the County in adopting the Newhall Ranch Specific Plan. As contemplated, the project residents and businesses would generate revenue in the form of sales taxes, property taxes, fees, etc., which would be available to the County to fund public services on the site (e.g., fire and police service, flood control, library service, street maintenance, and wastewater treatment). Revenues for capital improvements would also be generated by the project directly through various forms of development fees, including, but not limited to, fire facilities fees, water connection fees, wastewater connection fees, and school and library fees. Financing mechanisms for needed infrastructure improvements and supporting public service facilities could include private financing, assessment districts, landscape maintenance districts, fee districts, Mello-Roos districts, and bridge and thoroughfare fees.

(c) Affordable Housing

Section 3.10 of the adopted Newhall Ranch Specific Plan includes an Affordable Housing Program that provides for the direct inclusion of very low, low, and moderate income affordable housing opportunities within the Specific Plan area. At buildout, a total of 2,200 affordable dwelling units would be provided. The Affordable Housing Program includes timing mechanisms and monitoring provisions to ensure that affordable housing is provided concurrent with market rate housing. The applicant is required to identify the number and location of affordable housing units as a condition of tentative or final map approval.

Approximately 296 units located in the Medium Residential, High Residential, and Mixed Use land use categories would be set aside as affordable within the tract map site.

(3) Environmental Characteristics

Environmental characteristics associated with the entire buildout of the Specific Plan were thoroughly addressed by the County in the certified Newhall Ranch Specific Plan Program EIR; however, such characteristics are further analyzed at the project level for the Landmark Village project in this EIR.

b. Implementation of Smart Growth Principles

There are many different components that make a community sustainable or qualify it as a "smart growth" project. These include a proper mix of land use, provision of jobs, design for future transit uses in the plan, provision of open space and recreation, connectivity (trails), preservation of natural areas, the reduction of impermeable surfaces, water conservation and re-use, energy conservation, potentially including the use of alternative energies (solar, wind, cogeneration, etc.), and the incorporation of green building techniques. As is evidenced below, Landmark Village, as with Newhall Ranch, incorporates the components of a sustainable or smart growth community.

1. **Mix of Land Uses.** Landmark Village, along with the other villages in Newhall Ranch, will include a broad range of housing types, including affordable housing, along with commercial, office, and public facilities. As to Landmark Village, a diverse range of 1,444 homes (308 single-family and 1,136 multi-family units) would be provided. To minimize and shorten vehicle trips, most homes will be within walking distances to the Landmark Village community's commercial and mixed-use areas, elementary school site, community park, and trail system. Finally, Landmark Village is located adjacent to the Valencia Commerce Center, one of the largest employment centers in the Santa Clarita Valley. Bike and pedestrian trails within Newhall Ranch and Landmark Village will connect to trails within the Valencia Commerce Center.
2. **Provision of Jobs.** A portion of Newhall Ranch's approximate 20,000 new jobs would be offered through Landmark Village's mixed-use and commercial areas. Newhall Ranch is adjacent to the existing Valencia Gateway (which includes the Valencia Commerce Center), which presently provides 50,000 jobs. Other development within Valencia Gateway will create an additional 30,000 jobs. When completed, the job centers in Newhall Ranch and Valencia will have resulted in the creation of approximately 100,000 jobs in the Santa Clarita Valley. A balanced jobs-housing base is a critical component to a sustainable community because it allows people to work close to home and minimizes vehicle miles traveled.
3. **Locating of Residential Uses in Close Proximity to Commercial Services/Public Spaces.** Nearly 60 percent of the residential units in Newhall Ranch will be located within walking distance of village or commercial centers. This is clearly documented by the Landmark Village land plan. Residents within Landmark Village will be able to utilize paseos/trails and/or the Santa Clara River Regional Trail to walk to commercial centers, private recreational facilities, the elementary school and a community park. As stated above, this traditional neighborhood design minimizes vehicle trips.
4. **Provision of Transit and Light Rail Right-of-Way.** Newhall Ranch, including Landmark Village, will be part of the Santa Clarita Transit system and will pay its fair share for transit service to the community. Transit improvements within Newhall Ranch will include a park-and-ride lot, a future transit station, transfer station, bus stops, and preservation of light rail right-of-way. Landmark Village will include a total of five bus stops, a park-and-ride lot, and the preservation of light rail right-of-way along SR-126. The provision of transit and the accommodation of light rail encourage residents to rely less on vehicular travel.
5. **Open Space, Recreation, and Preservation of Sensitive Resource Areas.** Newhall Ranch, of which Landmark Village is a part, includes the preservation of the High Country; Santa Clara River Corridor; Open Areas; spineflower preservation areas; other specified Open Areas, primarily located within the Specific Plan's Estate Residential designation; and the Salt Creek area -- a total of over 10,000 acres. A total of three community parks (Landmark includes the first) and up to ten neighborhood parks will be provided as part of Newhall Ranch. Finally, private recreation facilities will be provided throughout the entire Ranch providing additional recreational opportunities to residents. In short, Landmark Village's design connects jobs, retail, schools, parks, and recreation facilities with the community's trail system to promote walking and biking while minimizing vehicle trips.
6. **Hierarchy of Trails.** Newhall Ranch will include over 50 miles of trails to encourage pedestrian mobility. Landmark Village includes a two-mile extension of the Santa Clara River trail, with direct connections to residential, commercial, and park uses, and various paseos including the paseo

running along "A" Street or the Landmark Village Spine Road. This design also is intended to minimize vehicle trips.

7. **Reducing Impermeable Surfaces.** To curtail urban runoff and maximize groundwater recharge, Newhall Ranch, including Landmark Village, will utilize open/soft bottom channels, smaller street sections, where possible, increased native landscape areas, and non-structural water quality treatment improvements.
8. **Water Conservation and Re-Use.** Newhall Ranch, including Landmark Village, will utilize native, drought-tolerant plants in the community's landscaping, use recycled water for irrigation, and evapotranspiration controllers (i.e., weather-sensitive sprinklers) to reduce potable water demand and runoff.
9. **Traffic/Transportation Improvements.** Landmark Village's traffic circulation plan, which is consistent with all of Newhall Ranch, minimizes vehicle trips and reduces greenhouse gas emissions through the design of internal roads in conjunction with homes, school site, commercial areas, and trail system. Transit is included in the traditional neighborhood design, and it includes a park-and-ride lot and bus stops. Additionally, a five-mile right-of-way for a potential Metrolink light rail extension is accommodated along SR-126. Trails and bike paths leading to close-to-home jobs, neighborhood-serving retail, and the school encourage residents to reduce vehicle miles traveled. Finally, Newhall Land has committed to funding significant regional roadway improvements including improvements to SR-126 and I-5.

c. Project Implementation/Phasing

Consistent with the Specific Plan (Chapter 5), implementation of the Specific Plan is to be carried out through the application and processing of County entitlements, including tentative subdivision maps, conditional use permits, oak tree permits, and other discretionary approvals or permits. In addition, the Specific Plan calls for all land subdivision maps of any type (e.g., tentative or final, vesting or non-vesting, tract or parcel) to be submitted, reviewed, and approved in accordance with the Los Angeles County Subdivision Ordinance and the California Subdivision Map Act.¹⁶

Consistent with the Specific Plan, the project applicant is seeking to implement the first phase of Newhall Ranch through the application and processing of the Landmark Village VTTM No. 53108, and related project approvals.

Development of uses would be based on market conditions. For purposes of this analysis, it is assumed that residential units will develop initially together with a small amount of retail and commercial space, with the balance of the development of commercial uses after enough residential uses are built to generate sufficient demand for goods and services to support on-site commercial development. Complete project buildout is assumed to take place approximately four to five years from the granting of all necessary Project Approvals.

¹⁶ Where the provisions or procedures of the Los Angeles County Subdivision Ordinance conflict with the approved Specific Plan, the Specific Plan applies (see Specific Plan, Chapter 5, Section 5.2).