APPENDIX 4.1-1E

Land Exchange Alternative
Public Facilities Financing Plan

Otay Ranch
Village 14 and Planning Areas 16/19
Land Exchange EIR Alternative

Specific Plan, Appendix 4

LAND EXCHANGE EIR ALTERNATIVE;
GPA 16-008, SP 16-002, REZ 16-006, TM 5616, ER # 16-19-006

FEBRUARY 2018

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Executive Summary

A. Overview

The Growth Management Chapter of the *Otay Ranch General Development Plan/Otay Subregional Plan Volume 2* ("Otay Ranch GDP/SRP") contains goals, policies, objectives and implementation measures governing the development of Otay Ranch to assure the efficient and timely provision of public facilities concurrent with demand and in compliance with facility-specific policies and thresholds. Processing and approval of this Public Facilities Financing Plan ("PFFP") is required in conjunction with preparation of the Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Specific Plan ("Land Exchange EIR Alternative/Specific Plan") to ensure the Land Exchange EIR Alternative ("Alternative Project") is consistent with the overall goals and policies of the Otay Ranch GDP/SRP. This PFFP is consistent with the overall Village Phasing Plan adopted by the County of San Diego ("County") Board of Supervisors in October 1993.

As a developer receives each succeeding development approval, the Otay Ranch GDP/SRP requires the Applicant to perform specific steps leading to the timely provision of the required facilities (Otay Ranch GDP/SRP, p. 348):

Performance of Facility Thresholds:

OTAY Ranch GDP/SRP

- *Goals, objectives and policies established.*
- *Facility thresholds established.*
- *Processing requirements established.*

SPECIFIC PLAN

- *Facility financing refined and funding source identified consistent with Otay Ranch GDP/SRP goals, objectives and policies.*
- *Facility demand and costs calculated consistent with adopted land uses and Otay Ranch GDP/SRP-defined methodologies.*
- *Specific facility financing and phasing analysis performed to assure compliance with Growth Management Thresholds.*
- *Facilities sited and zoning identified.*

TENTATIVE MAP

- *Subdivision approval conditioned upon assurance of facility funding.*

- *Subdivision approval conditioned upon payment of fees, or the dedication, reservation, or zoning of land for identified facilities.*
- *Subdivision approval conditioned upon construction of certain facility improvements.*

FINAL MAP

- *Tentative Map conditions performed.*
- *Lots created.*

BUILDING PERMIT

- *Impact fees paid as required.*

The PFFP analysis begins by assessing the demand for facilities based upon the demand from existing development and those projects with approved final and tentative maps. Public facility demands of the Land Exchange EIR Alternative, pursuant to a phasing projection of the future development of the Land Exchange EIR Alternative, is then analyzed to estimate how much, and at what time additional or upgraded facilities will be needed to ensure a particular facility does not fall beneath the adopted facility performance threshold. When specific thresholds are projected to be reached or exceeded, the PFFP provides recommended remedial action necessary for continued compliance with the Otay Ranch GDP/SRP.

B. Information Provided in this PFFP

The PFFP requires the preparation and approval of phasing schedules showing how and when facilities and improvements necessary to serve the Land Exchange EIR Alternative will be installed or financed to meet the thresholds, including (Otay Ranch GDP/SRP, pp. 348-349):

- *An inventory of present and future requirements for each facility.*
- *A summary of facilities cost.*
- *A facility phasing schedule establishing the timing for installation or provisions of facilities.*
- *A financing plan identifying the method of funding for each facility required.*
- *A fiscal impact report analyzing Specific Plan consistency with the requirements and conclusions of the Otay Ranch Service Revenue Plan.*

C. General Conditions of this PFFP

1. All development within the Land Exchange EIR Alternative shall conform to the provisions and conditions of this PFFP.
2. All development within the Land Exchange EIR Alternative shall be required to pay applicable development impact fees for public facilities and other applicable fees pursuant to the most recently adopted programs by the County Board of Supervisors and applicable service agencies or districts, and as amended from time-to-time.
3. This PFFP shall be implemented in accordance with the Otay Ranch GDP/SRP.
4. Approval of this PFFP does not constitute prior discretionary review or approval of specific projects within the boundaries of the Specific Plan. All future projects within the boundaries of the Land Exchange EIR Alternative shall undergo development review and approval in accordance with County regulations and the Specific Plan, Development Regulations.
5. The facilities and phasing requirements identified in this PFFP are based on an assumed projection of development. If a less intense development or fewer residential units are actually constructed, facility and phasing requirements shall be adjusted accordingly.
6. This PFFP includes a phasing plan. This forecast is not to be considered absolute. Alternative phasing may occur. The actual number of dwelling units and other uses to be constructed in any particular phase will vary depending upon economic and other external conditions.

D. Proposed Public Facility Improvements

This PFFP analysis concludes that a number of public facility improvements will be required of the developer of the Land Exchange EIR Alternative in order to achieve compliance with the adopted thresholds. These improvements are listed in Table 1, Summary of Alternative Project Public Facility Improvements. Refer to Table 2, Facilities and Infrastructure Construction and Responsibilities for a list of construction and maintenance responsibilities for public facilities and improvements.

Table 1: Summary of Alternative Project Public Facility Improvements

Improvement
DRAINAGE FACILITIES
· Storm Drains in internal streets. · Two (2) Water Quality Basins (refer to Exhibit F). · Three (3) Roadside Biofiltration Areas
SEWERAGE FACILITIES
· Onsite Lift Station · Onsite Force main · Offsite Gravity Sewer · Sewer Lines in internal streets
TRANSPORTATION SYSTEM FACILITIES
· Proctor Valley Road from Alternative Project Southern Boundary to Northern Boundary · Onsite circulation roadways within Alternative Project.
URBAN RUNOFF FACILITIES
· Two (2) Water Quality Basins. Three (3) Roadside Biofiltration Areas
WATER FACILITIES
· 1296-4 Reservoir (5.0-million-gallon capacity) (TBD) · 1296 Transmission Line (TBD) · 1296 Zone Pump Station · Off-site Transmission Line to Jamul · Off-site Transmission Line to Chula Vista · Water lines in internal streets
FIRE PROTECTION AND EMERGENCY FACILITIES
· Reserve Public Safety Site. · Enter into a "Fire Service Agreement"
LAW ENFORCEMENT FACILITIES
· Reserve Public Safety Site or location with Multiple Use Planning Area.
PARKS AND RECREATION FACILITIES
· Dedicate parkland and provide improvements consistent with San Diego County Park Land Dedication Ordinance
SCHOOL FACILITIES
· Reserve Elementary School site · Pay state mandated school fee or enter into mitigation agreement(s) with District(s)

Table 2: Facilities and Infrastructure (Construction and Responsibilities)

	Acquisition	Construction	Maintenance	Ownership	Access
Public Roads	Developer(s)	Developer(s)	County/ District	County	Public
Private Roads	Developer(s)	Developer(s)	HOA	HOA	Private
Proctor Valley Rd Off Site Improvements in the County	Developer(s)	Developer(s)	County	County	Public
Proctor Valley Rd Off Site Improvements in Chula Vista	Developer(s) and Fair Share Contribution	Developer(s) and Fair Share Contribution	City of Chula Vista	City of Chula Vista	Public
Trails	Developer(s)	Developer(s)	HOA or County/District or Special District	County and City of Chula Vista(1)	Public
Landscaped Parkways	Developer(s)	Developer(s)	HOA or County/District or Special District	County and City of Chula Vista(1)	Public
Public Road Lighting	Developer(s)	Developer(s)	County or County/District	County and City of Chula Vista (1)	N/A
Specialty Village Lighting	Developer(s)	Developer(s)	HOA	HOA	N/A
MU Parking Lot	Developer(s)	Developer(s)	HOA	HOA	Public
RMP Preserve	Preserve Conveyance	NA	POM Assessment	POM	Public
Internal Open Space (HOA)	Developer(s)	Developer(s)	HOA	HOA	Public
Internal Open Space (Public)	Developer(s)	Developer(s)	HOA or County/District	HOA or County/District	Public
Public Parks	Developer(s)	Developer(s)	Special District	County	Public
Private Parks	Developer(s)	Developer(s)	HOA	HOA	HOA
Water System	Developer(s)	Developer(s)	OWD	OWD	NA
Sewer System	Developer(s)	Developer(s)	County/District	County/District	NA
Storm Drain	Developer(s)	Developer(s)	County	County	NA
Drainage Basins	Developer(s)	Developer(s)	HOA or County/District	HOA or County/District County	NA

Fire Station	Developer(s)/ County	Developer(s)/ County	San Diego County Fire Authority	San Diego County Fire Authority	NA
School	Developer(s)/ District	Developer(s)/ District	School District	School District	Public

Definitions	
Developer and Fair Share Contribution	Obligation will be satisfied through a combination of developer(s) performance and payment of impact fees.
Preserve Dedication	Obligation will be satisfied through compliance with the RMP Preserve Conveyance Obligation requirements.
POM Assessment	Obligation will be satisfied through compliance with the RMP 2 requirement to establish an assessment mechanism.
Developer/ District	**Acquisition and Construction may be performed by the Developer(s) but funded through an assessment mechanism.**
County/District	Performance or title may be held by the County but funded through an assessment mechanism.
HOA	Obligation will be satisfied through Homeowners Association

Footnotes:

(1) City of Chula Vista is for that portion of Proctor Valley Road located within the City of Chula Vista Boundaries

1.0 Introduction

1.1 Overview

The purpose of this PFFP is to address the demand and adequacy of planned public facilities associated with the anticipated development of the Land Exchange EIR Alternative. This PFFP has been prepared in compliance with the requirements of the Otay Ranch GDP/SRP. Part II of the Otay Ranch GDP/SRP identifies thirteen (13) areas of public facility analysis required for implementation of the Land Exchange EIR Alternative. The list of facilities and services evaluated in this PFFP are as follows.[1]

- Drainage Facilities
- Sewerage Facilities
- Transportation System Facilities
- Urban Runoff Facilities
- Water Facilities
- Water Reclamation Facilities
- Civic Facilities
- Fire Protection / Emergency Facilities
- Law Enforcement Facilities
- Library Facilities
- Parks and Recreation Facilities
- School Facilities
- Animal Control Facilities

In addition to analyzing these 13 facilities, the Otay Ranch GDP/SRP requires a PFFP to include Regional Facility Report for the following regional facilities.

- Arts and Cultural Facilities
- Cemetery Facilities
- Health and Medical Facilities
- Social and Senior Services Facilities
- Correctional Facilities
- Justice Facilities

Other facilities required to be addressed at the Specific Plan level are Solid Waste and Childcare facilities. This PFFP includes analysis of these facilities in Chapter 15.

1.2 Otay Ranch GDP/SRP Thresholds

The Otay Ranch GDP/SRP identifies public facilities and services with related thresholds and implementation measures. These public facilities and services are described in the Otay Ranch GDP/SRP and the Otay Ranch Facility Implementation Plan. The thresholds contained in the Otay Ranch GDP/SRP, Part II, Chapter Five are used to evaluate if the demand generated by new development complies with the adopted threshold.

[1] Listed in Otay Ranch GDP/SRP Part II, p. 351.

This PFFP identifies new or upgraded facilities or services needed to comply with the threshold.

1.3 Facility Analysis

This PFFP analyzes facility adequacy for each of the applicable facilities and services. Each analysis is based upon the Land Exchange EIR Alternative processing requirements for that facility. These establish the requirements for evaluating Land Exchange EIR Alternative consistency with the threshold ordinance at various stages of entitlement action (General Plan, Specific Plan/Public Facilities Finance Plan, Tentative Map, Final Map and Building Permit) in the development review process.

A service analysis section is also included in this PFFP which identifies and provides background information on the service provided by each specific facility. An existing conditions inventory is then integrated into the analysis of each facility. The demand created by the Land Exchange EIR Alternative is then assessed for each facility. This PFFP is based upon the assumptions of a phased, non-sequential development scenario of the Land Exchange EIR Alternative (See Section 2.4). Based upon this phasing Alternative Projection, an adequacy analysis of proposed facility improvements is conducted.

The adequacy analysis provides a determination of whether or not compliance with the threshold will occur and be maintained, and the finance section provides a determination of whether funds are available to assure the improvement. The analysis includes remedial actions which will be necessary to bring the facility into conformance with the threshold.

In addition, this PFFP addresses Regional Facility Plans to ensure compliance as required by the Otay Ranch GDP/SRP.

Exhibit A - Regional Location Map

2.0 Land Use Assumptions

2.1 Purpose

The purpose of this section is to quantify the manner in which the Land Exchange EIR Alternative will be developed, and to analyze the proposed development pattern in relationship to existing urban development and infrastructure in the area, as well as all other projects at some stage of the development process in the County and the City of Chula Vista. Public facility demand associated with the Land Exchange EIR Alternative is added to this existing demand in order to assess facility adequacy through buildout of the Land Exchange EIR Alternative.

2.2 Existing Development

This PFFP considers existing and approved development up to December 2017 as the base condition. This information is based upon input from the County of San Diego Department of Planning and Development Services and the City of Chula Vista Development Services Department.

The present population within the Jamul-Dulzura Subregional Plan (JDSP) subarea of the County (2010) is 10,159 persons. The JDSP identifies the Otay Ranch Alternative Project as a "Specific Planning Area" within it's boundary. The development policies for the Otay Ranch project area contained in the Otay Ranch GDP/SRP. The policies contained in the JDSP apply to the areas of Otay Ranch located within the Jamul/Dulzura sub region. In case of conflict, the policies in the Otay Ranch GDP/SRP shall take precedence (JDSP 2016, Page 11) No development has occurred within the unincorporated area of Otay Ranch at the time of preparation of this PFFP.

2.3 Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Specific Plan

A summary of the anticipated land uses for the Land Exchange EIR Alternative is shown in Table 3. The total number of homes planned is 1,530 (1,124 single family homes, 283 would be single family age-restricted homes and 123 multi-family homes). The Land Exchange EIR Alternative also includes a 2.3-acre public safety site, 8.3-acre elementary school site, 20.4 acres of public and private parks and recreational uses, approximately 1,757 acres of RMP Preserve Land, and approximately 23.1 acres of circulation facilities.

The Land Exchange EIR Alternative assumes the completion of a land exchange agreement with the State of California. The total Land Exchange Area covers approximately 2,387 acres, of which the Applicant owns 1,294 acres, the State owns approximately 1,053 acres and 39.9 acres are off sites. Within the Land Exchange Area, there are 1,003 acres in Village 14 and 1,345 acres in Planning Areas 16/19. Off sites include Proctor Valley Road and related utilities in South and Central Village 14. The State's ownership is included in the Land Exchange EIR Alternative in order to process County General Plan/Otay Ranch GDP/SRP Amendments to remove existing approved Otay Ranch GDP/SRP/County General Plan development land uses and convert this area to MSCP County Subarea Plan/Otay Ranch RMP Preserve.

The Land Exchange limits development to Otay Ranch Village 14 and converts the majority of development approved by the Otay Ranch GDP/SRP in Planning Areas 16/19 to MSCP and Otay Ranch RMP Preserve. The Land Exchange EIR Alternative assumes the completion of a land exchange agreement with the State of California and a simultaneous boundary adjustment to the MSCP and Otay Ranch RMP Preserve systems.

MSCP County Subarea Plan and Otay Ranch RMP boundary adjustments are being processed concurrently with the land exchange, as part of the Land Exchange EIR Alternative. The boundary adjustments would result in a net increase to RMP Preserve of approximately 268.5 acres. Specifically, the "Land Exchange EIR Alternative" proposes to:

- Exchange 278 acres owned by the State in Village 14 for 278 acres owned by the Applicant in Planning Area 16;
- Convert approximately 169.8 acres in Planning Areas 16/19 (Applicant's ownership) from development/limited development area to RMP Preserve;
- Convert approximately 142.3 acres in Village 14 (State's ownership) from development to RMP Preserve; and
- Convert approximately 43.6 acres in Village 14 (State's ownership) from RMP Preserve to development.

These areas are identified on the following land use summary and phasing tables, and are depicted in Exhibit B, Site Utilization Plan.

Table 3: Land Exchange EIR Alternative Land Use Summary

		Acres	Units	Density
Residential Uses				
Single Family Residential				
R-1	SF-2	28.9	112	3.9
R-2	SF-2	37.1	72	1.9
R-3	SF-1	41.7	67	1.6
R-4	SF-2	14.3	57	4.0
R-5	SF-2	33.9	109	3.2
R-6	SF-2	30.6	75	2.4
R-7	SF-2	32.1	91	2.8
R-8	SF-2	20.1	47	2.3
R-9	SF-1	41.5	74	1.8
R-10	Age Restricted SF-1	42.5	127	3.0
R-11	Age Restricted SF-1	34.4	156	4.5
R-12	SF-2	12.3	44	3.6
R-13	SF-1	36.4	66	1.8
R-14	SF-2	26.9	60	2.2
R-15	SF-1	38.5	59	1.5
R-16	SF-3	31.7	191	6.0
Single Family Subtotal		503.1	1,407	2.8
Multi-Family & Mixed Use				
MF-1		4.6	69	15.2
MU-1 *(2)*		3.5	54	15.5
MF & Mixed Use Subtotal		8.0	123	15.3
Residential Subtotal *(3)*		**511.2**	**1,530**	**3.0**
Non-Residential Uses				
Public Parks				
P-1	Village Green	3.9		
P-2	Overlook Park	4.2		
P-3	South Park	2.9		
P-4	Scenic Park	2.5		
Public Parks Subtotal		**13.5**		
Private Parks				
PP-1	South	0.8		
PP-2	Central	1.0		
PP-3	Senior Activity Center	1.8		
PP-4	North	1.4		
PP-5	Village Core	1.9		
Private Parks/Recreation Subtotal		6.9		
Public Uses				
Public Safety		2.3		
Elementary School		8.3		
Public Uses Subtotal		10.6		
Open Space & RMP Preserve				
Internal Open Space *(4)*		33.4		

RMP Preserve	403.9		
Open Space & RMP Preserve Subtotal	437.3		
Circulation Subtotal *(5)*	23.1		
Non-Residential Uses Subtotal	**491.4**		
Proctor Valley Village 14 Subtotal	**1,002.6**	**1,530**	**1.5**
Planning Area 16/19			
Circulation in Preserve *(6)*	16.4		
RMP Preserve	275.4		
Exchange to State for preserve	278.0		
Existing State Ownership (portion)	775.1		
Planning Area 16/19 Subtotal	**1,344.9**		
Proctor Valley Village and Planning Areas 16/19 Grand Total	**2,347.4**	**1,530**	**0.7**

NOTES

(1) Additional offsites excluded from the acreage above include:

Proctor Valley Road Offsite Central & South	39.9
Offsite Sewer to Salt Creek Interceptor	TBD

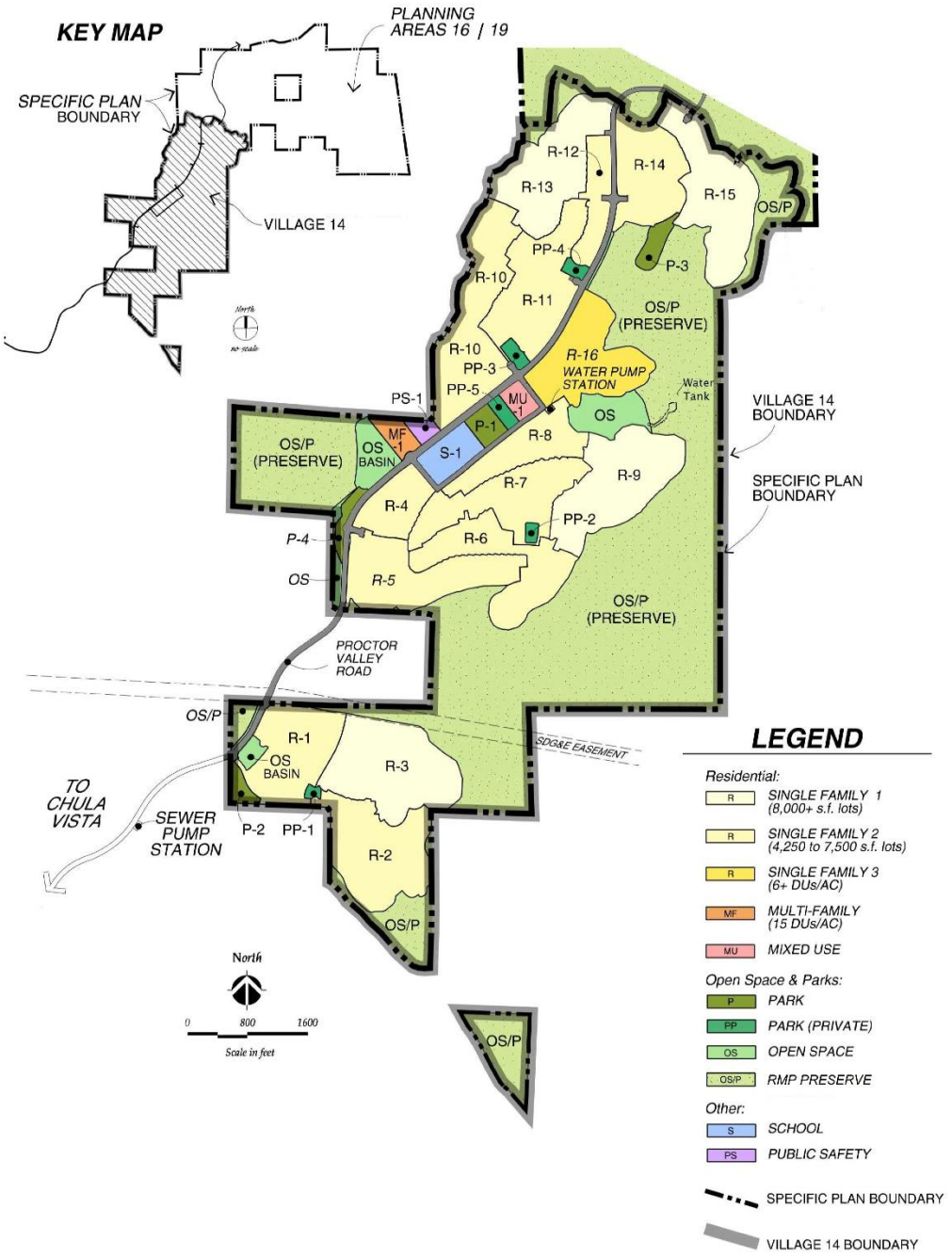
(2) Mixed Use acreage includes 15,000 sf of commercial use

(3) Residential acreage includes 151.6 acres of fuel mod and internal open space slopes and 2.6 acres of private pocket parks.

(4) Open Space included 11.3 acres of basins and HOA open space lots not included in the residential acreage.

(5) Proctor Valley Road Onsite in Village 14 only

(6) Proctor Valley Road north in Planning Area 16 is in Preserve



Land Exchange Alternative

Exhibit B - Site Utilization Plan

2.4 Conceptual Alternative Project Phasing

For purposes of this PFFP analysis, the Land Exchange EIR Alternative will be constructed in three phases. The Conceptual Phasing Plan, Exhibit C, divides the Specific Plan into three geographic phases. Necessary infrastructure and amenities for each phase will be provided as the development progresses.

The Phasing Plan is non-sequential to respond to regulatory constraints or economic and market fluctuations. Therefore, the Specific Plan identifies facilities performance thresholds and infrastructure improvements for each phase as if that phase developed without relying on other phases. Table 1 identifies the infrastructure that must be constructed with each phase.

This Phasing Plan also identifies Village-wide thresholds for improvements to Proctor Valley Road, off-site water and sewer transmission lines, provision of the water reservoir, delivery of the school site, improvement of the neighborhood parks and delivery of the Public Safety Site.

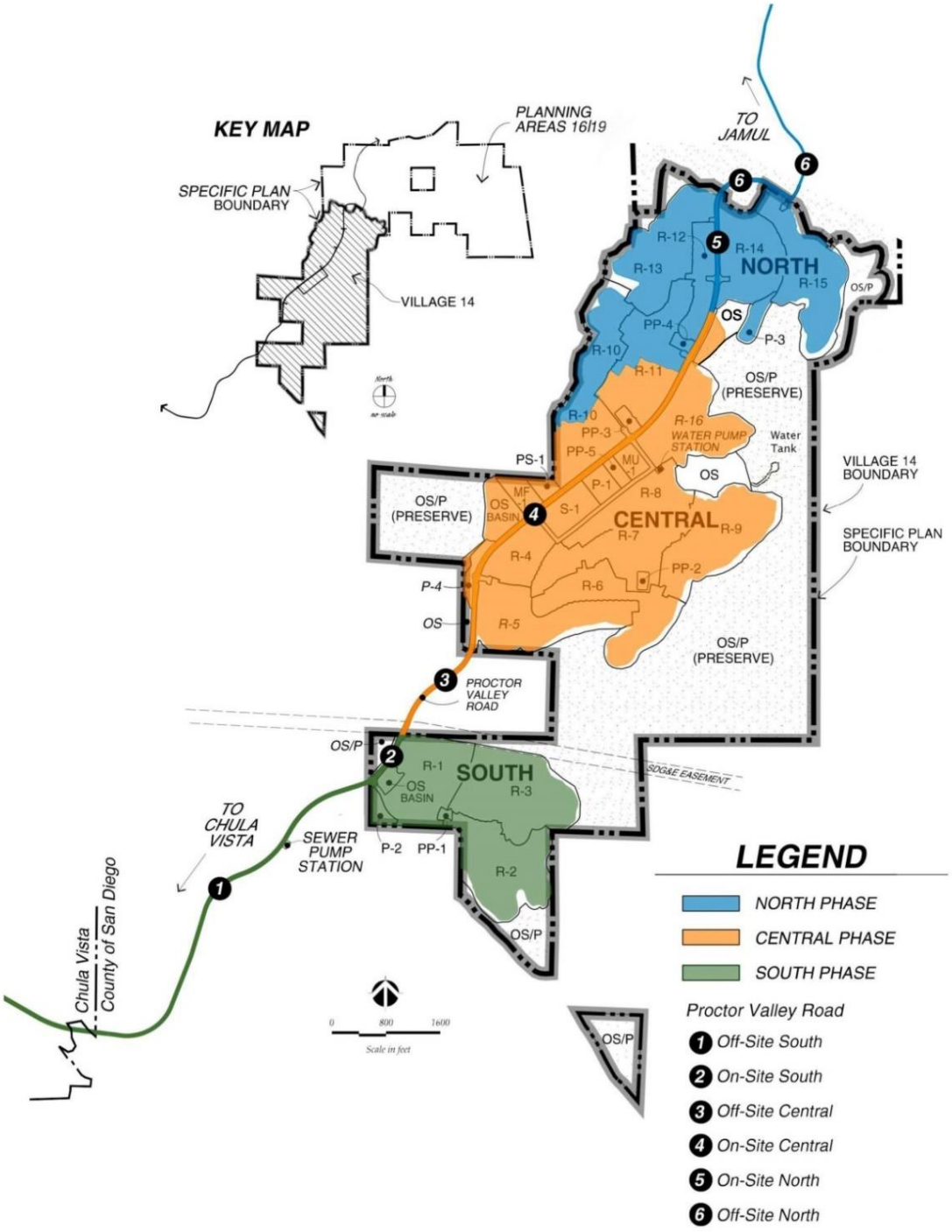


Exhibit C – Conceptual Phasing Plan

2.5 Population-based Analysis

Several of the public facilities thresholds are based on providing a quantity of facilities per sum of population. As a result, it is necessary to determine a population projection for each assumed phase. For the 91914 zip code, SANDAG estimates the average persons per home to be 3.6.

The population of the Land Exchange EIR Alternative is projected to be approximately 5,508 persons. This projection is calculated by applying SANDAG population for the 91914 zip code (3.6 persons per home) and multiplying by 1,530 homes.

3.0 Drainage Facilities

3.1 Otay Ranch GDP/SRP Threshold

Drainage facility will be designed to meet the County Standards and will mitigate any increase in runoff volume or velocity. Storm water flows and volumes shall not exceed Engineering Standards of the governing land use jurisdiction (County).

3.2 Service Analysis

The San Diego County Flood Control District is responsible for ensuring safe and efficient storm water drainage control systems are provided concurrent with development in the unincorporated portions of the County. The County Board of Supervisors acts as the Board of Directors for the district. District staff reviews individual projects to ensure that improvements are provided consistent with any applicable approved drainage master plan(s) and that development projects comply with all County engineering drainage standards.

The *CEQA Drainage Study*, prepared by Hunsaker & Associates, Inc., dated October 2017, assesses the existing (Pre-Development) and developed (Post-Development) drainage conditions of the Alternative Project site. The purpose of this Drainage Study to assess the onsite peak flow runoff rates from the proposed Village 14 site as well as any associated offsite runoff which will be conveyed through the Alternative Project site. Additionally, this report analyzes the proposed major storm water drain facilities needed to route these flows downstream without adversely impacting the downstream natural drainages. The total drainage study area encompasses 2,347.4 acres.

Public infrastructure-type drainage trunk facilities and services are also addressed in the *Otay Ranch Facility Implementation Plan* dated October 28, 1993.

3.3 Alternative Project Processing Requirements

1. Identify drainage demand.
2. Identify locations of facilities for on-site and off-site improvements.
3. Provide cost estimates.
4. Identify financing methods.

3.4 Existing Conditions

The Alternative Project Area contains no development. The topography is characterized by moderate to steep hills, canyon and vegetation consisting mainly of chaparral and coastal sage scrub. No development exists in adjacent lands which drain through the Alternative Project Area. The elevation ranges for the watershed which drains through the site is between 520 feet above mean sea level ("AMSL") at the upstream end of the Upper Otay Reservoir to 2,045 feet AMSL at the high ridge line east of Proctor Valley. Proctor Valley Road traverses the Alternative Project site connecting the community of Jamul to the City of Chula Vista.

In general, Proctor Valley Road follows the existing contours of Proctor Valley and shows evidence of runoff overtopping and sheet flowing particularly at the locations of the major existing drainage paths. Proctor Valley Road and Proctor Valley generally parallel each other. Canyon runoff east and west of Proctor Valley confluence at Proctor Valley and flow in a southwesterly direction to discharge into Upper Otay Reservoir.

In its current state, Proctor Valley Road is in various stages of improvement (i.e. paved or dirt). Proctor Valley Road from the northern Alternative Project boundary at Melody Road to approximately 1.3 miles south within the Alternative Project Area is paved and improved. At that point, there is two tenths of a mile stretch that is dirt. The pavement continues for approximately eight tenths of a mile into the northern portion of Village 14. From that point the quality of the road is deteriorated pavement for approximately 2.5 miles to the intersection of Proctor Valley Road and Northwoods Drive in the City of Chula Vista.

The onsite drainage watersheds and a summary of the existing condition drainage flows are as identified in the following table and shown graphically in the *Land Exchange EIR Alternative Drainage Study*. The existing junctions are not sufficient to satisfy drainage demand and will require upgrades to prevent roadway overtopping during the design flow event.

3.5 Alternative Project Demand and Proposed Facilities

3.5.1 Post Development Watersheds

Development of the Alternative Project site will include the construction of single-family residential homes, multi-family homes, parks, an elementary school site, a public safety site, and the accompanying roads and infrastructure improvements. Roughly 590.3 acres

of the 2,347-acre property will be developed. The balance (approximately 1,757 acres) will remain in Otay Ranch RMP Preserve, including natural preserve open space, basins, open space slope areas, and state-owed preserve open space.

The location of the Land Exchange EIR Alternative along Proctor Valley Road is such that it intersects the offsite RMP preserve area's natural drainage path towards Proctor Valley. Therefore, a storm drain will be required to collect and convey this offsite runoff through the developed portion of the Land Exchange EIR Alternative. The proposed onsite storm drain system will collect development runoff and discharge a portion of those flows as described below into a proposed BMP basin intended for water quality and hydromodification treatment. For clarity in the remaining portion of this chapter, the general term of 'water quality basin' is used to define the proposed structural BMP basins rather than the more specific basin classifications such as retention, partial retention, or biofiltration. Routing the offsite preserve area flows through the proposed basins would significantly increase the basin size. Therefore, dual storm drain configurations are proposed throughout the Alternative Project wherever feasible to avoid comingling of onsite and offsite flows.

The runoff from the 85th percentile storm, as defined by the San Diego County Hydrology Manual (SDCHM), as well as flow control (HMP) flows and drier weather runoff from developed areas of the Alternative Project Area will be routed to the water quality basins. The riser outlet structure for each basin will be designed to address water quality and hydromodification for its respective watershed and drainage management area ("DMA").

For the larger water quality basins, it may be most feasible to bypass peak flowrates rather than to discharge them into the respective basin. In those instances, runoff in excess of the upper HMP flowrate threshold (Q10) will bypass the basin via a diversion structure placed upstream of the basin. The performance of the water quality basins is described in depth in the *Major Stormwater Management Plan for Land Exchange EIR Alternative* by Hunsaker & Associates dated February 2018.

The total Post-Development water discharge is greater than the total Pre-Development discharge, however, the capacity of Upper Otay Lake is sufficient to convey the proposed peak flow increases.

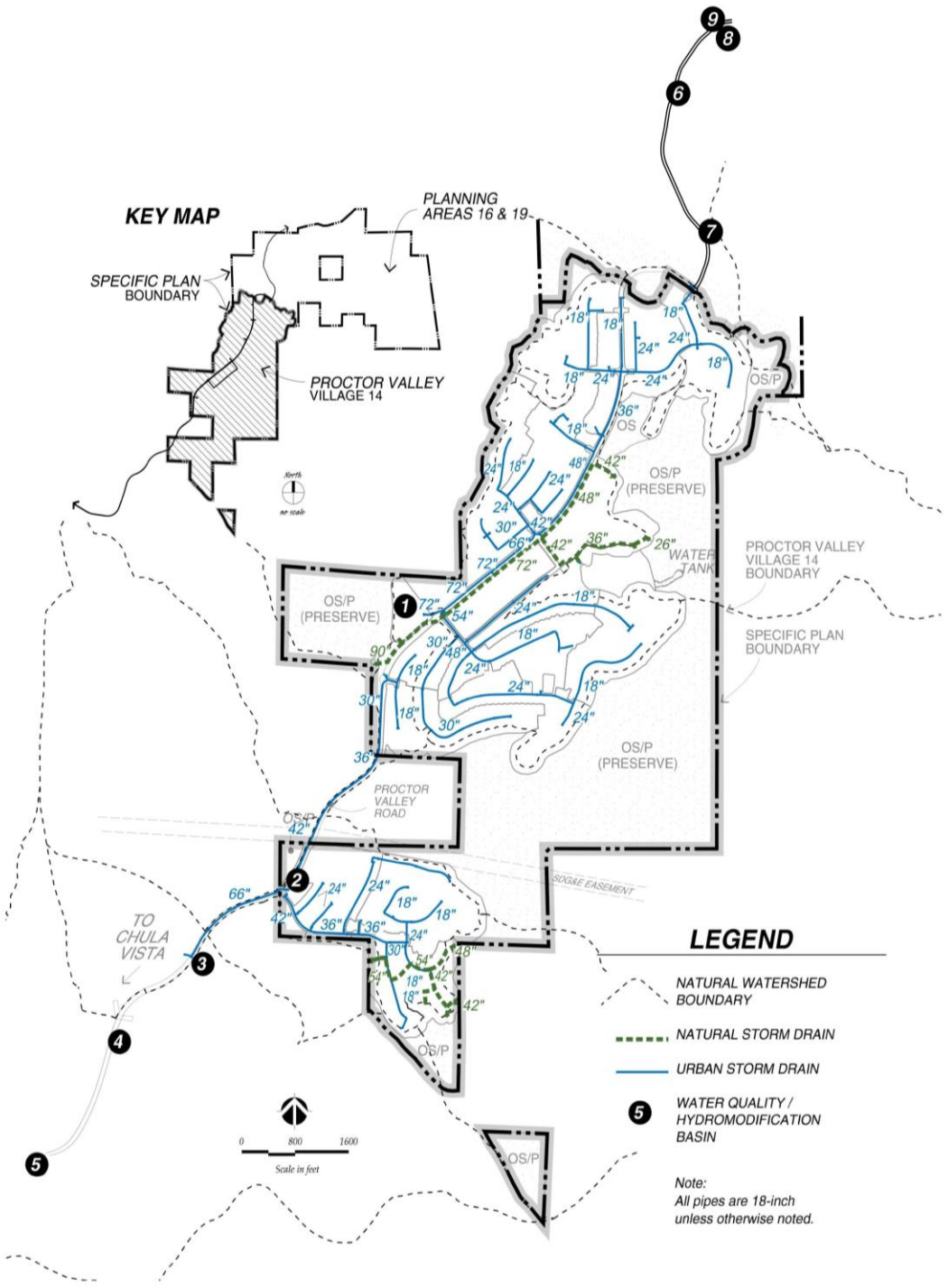


Exhibit D – Drainage Facilities Plan

At the downstream end of the storm drain systems, the culvert crossings under Proctor Valley Road will be constructed to prevent roadway overtopping. The following, Table 4, summarizes the 100-year developed condition peak flows to each of the discharge locations at Proctor Valley Road. Flows for Land Exchange EIR Alternative junctions were generated using the Natural Resources Conservation Service ("NRCS") Unit Hydrograph Method as explained in Chapter 4 of the SDCHM.

Table 4: Post-Development Watershed Area

Junction Name	Proposed Drainage Area to Junction (acres)	100-Year Proposed Developed Peak Flow (acres)
J001	953.8	1,528
J003	2,764.0	4,977
J004	4,068.1	6,925
J005	5,328.1	9,922
J007	6,109.8	11,222
J008	6,190.6	11,219
J009	6,880.7	12,372

3.5.2 Rational Method – 100 Year Storm

As mentioned, all methodology used in this analysis is consistent with standards set forth by the SDCHM. Since the total contributing watershed area to each water quality basin is less than one square mile in the proposed Developer areas, the Rational Method was used to determine peak flow rates. The NRCS Unit Hydrograph Method was used to determine peak flow for junctions listed in Table 4. Per County of San Diego methodology, all hydrologic results correspond to the 100-year design storm.

In accordance with County drainage criteria for the Post-Developed condition and following the recommendations of the County's comments in the original Master Drainage Study, the Rational Method has also been used to determine peak design flow rates since all the contributing drainage areas are less than 1.0-square mile. The AES-2010 computer software was used to model the runoff response per the Modified Rational Method. Methodology used for this computation of design rainfall events, runoff coefficients, and rainfall intensity values are consistent with criteria set forth in the most current SDCHM. The areas draining to Junctions 1, 3, 4, 5, 7, 8, and 9 are greater than 1.0- square mile for proposed conditions. The NRCS Unit Hydrograph was developed using the HEC-HMS software program. All input for this program is consistent with Chapter 4 of the SDCHM. A more detailed explanation of methodology and model development used for this analysis is listed in the *Land Exchange EIR*

Alternative Drainage Study. Details addressing the storm water requirements are discussed in the *Storm Water Quality Management Plan for Otay Ranch Village 14 and Planning Areas 16/19- Land Exchange Alternative*.

As mentioned, the 100-Year peak flow event analysis concludes that multiple culverts under Proctor Valley Road, which would transport the alternative area drainage from the water quality basins to the Upper Otay Reservoir, will need to be constructed to service the post-developed discharge.

Table 5: Post Development 100-Year Peak Flows and Conveyance

Crossing ID #	*Discharge Location*	*Onsite/ Offsite*	*100- Year Developed Peak Flow (cfs)*	*Proposed Stormwater Conveyance Size*
J006	Along PVR between North and South WQ Basins	Onsite	2,675	12′ x 20′ arch culvert
J008	Along PVR south of (residential portions of) Village 14	Onsite	11,334	Three (3) – 12′ x 34′ arch culverts
PVR1	South of North WQ Basin	Offsite	1,031	96″ RCP
PVR2	South of South EQ Basin	Offsite	600	3-4′ x 7′ RCBC
PVR3	Southern end of PVR	Offsite	1,426	306′ x 6′ RCBC

Table 5 provides details of the proposed major storm drain improvements along Proctor Valley Road. From an analysis of Table 5, four (4) arch culverts would be constructed at Junctions 6 and 8, and a 96″ reinforced concrete pipe (“RCP”) and two (2) reinforced concrete box culverts crossings (“RCBC”) would be constructed.

Regarding the peak flow comparison from Pre and Post-Development conditions, the Land Exchange EIR Alternative will increase the Post-Development 100-year peak flow by about 336 cfs from 12,036 cfs to 12,372 cfs. However, Post-Development storm drain facilities can accommodate the proposed peak flows. Additional details regarding the conveyance of drainage Pre and Post-Development can be found in the *Land Exchange EIR Alternative Drainage Study*.

The hydrologic analysis concludes that it will be necessary to construct storm drain systems throughout the proposed development to adequately convey runoff to the locations of the proposed water quality basins and the downstream culverts. The basins

are designed of an adequate size to handle the necessary volumes identified for each DMA. Installation of the nine water quality basins and four roadside biofiltration facilities will ensure that the downstream drainage system will not be adversely affected by the Alternative Project.

Additional analysis specific to storm water detention is discussed in the Urban Runoff section (Section 6.0) of this PFFP.

3.5.3 Hydromodification

It was determined that the Alternative Project has demonstrated that the proposed biofiltration basin footprints for the Proctor Valley Village 14 site are sufficient to meet the current hydromodification management plan ("HMP") criteria if the biofiltration cross-section area and volume recommended are incorporated within the Land Exchange EIR Alternative site. The overall tributary area to the Alternative Project's junctions increased with development but were treated to address hydromodification via the proposed onsite basins. Findings regarding the hydromodification requirements can be found in the *HMP Flow Control Facility Design for Otay Ranch Village 14 and Planning Area 16/19- Land Exchange Alternative*, dated February 2018.

3.6 Adequacy Analysis

The hydrologic analysis concludes that construction of the Post-Development storm drain systems throughout the Alternative Project to the proposed water quality basins, and the downstream culverts, will result in storm drain infrastructure that is in compliance with County standards. This proposed drainage control infrastructure program also minimizes the opportunity for downstream pollution. The analysis concludes that the basins and culverts will be designed of an adequate size to handle the necessary volumes, consistent with the standards. Subject to installation of the storm drain system, the Alternative Project will consist of an adequate program of storm drain collection.

In addition, the following conditions shall be required of the developer of the Alternative Project:

1. The Alternative Project will be designed to avoid violation of any water quality standards or waste discharge requirements. Storm water treatment design is further discussed in the *Storm Water Quality Management Plan for Otay Ranch*

Village 14 and Planning Areas 16/19- Land Exchange Alternative dated February 2018.

2. Development of the Alternative Project site will not degrade potential beneficial uses of downstream water bodies as designated by the Regional Water Quality Control Board, including water bodies listed on the Clean Water Section 303d list.
3. Minor alterations of the existing drainage pattern, required as part of the proposed development, will be mitigated in a manner that would prevent substantial erosion or siltation onsite or offsite. Energy dissipater systems will be designed at proposed culvert outfalls.
4. Development of the Alternative Project site does not encroach on any 100-year flood hazard areas as defined by FEMA. Proposed structures will be elevated above the anticipated 100-year water surface elevation. As such no CLOMR is required.
5. Prior to recordation of the final map, 100-year flood lines will be established for any lot encumbered by drainage channel conveying a watershed area in excess of 25 acres. Any such floodplain boundary shall be clearly delineated on the non-title information sheet of the final map.
6. Onsite and offsite drainage easements shall be provided to the satisfaction of the Director of Public Works.
7. A flowage easement shall be granted to the San Diego County Flood Control District for all portions of the development site subject to inundation by a 100-year flood from a drainage area in excess of one square mile.
8. The Drainage Study and SWQMP for this Alternative Project will be submitted to the City of San Diego and County of San Diego for review.

3.7 Inventory of Future Required Drainage Facilities

The following table lists the major drainage trunk facilities that will be required as a condition of the Alternative Project.

Table 6: Inventory of Major Drainage Trunk Facilities to be Constructed

Drainage Facility	Onsite/Offsite	Number	Responsibility
Storm Drains in internal streets	Onsite	As required by S.D. County Engineering Standards	Developer
Water Quality Basins	Onsite	9	Developer
Roadside Biofiltration Areas	Offsite	4	Developer

3.8 Threshold Compliance

Subject to phased developer installation of the above-referenced drainage facilities as described in this PFFP, the planned development of the Alternative Project site will not adversely impact the existing natural drainage condition of the Alternative Project site.

- The increased runoff resulting from the proposed development will be mitigated through installation of the required drainage infrastructure, including five water quality basins, biofiltration and the installation of outflow drainage culverts under Proctor Valley Road.
- The Alternative Project shall be responsible for the conveyance of ultimate storm water flows in accordance with County standards.
- The Developer shall submit drainage plans to the County Department of Public Works and the County Flood Control District shall review to ensure compliance with County of San Diego Public Works and Flood Control Standards.
- Satisfaction of drainage conditions of approval associated with subdivision of the site will constitute compliance with the adopted threshold.

3.9 Drainage Facilities Phasing

Table 7, Drainage Facilities Improvements, describes the phasing for drainage facility improvements in the Land Exchange EIR Alternative. In addition to the facilities described in the Table 7, storm drains will be required to be installed in internal streets prior to the issuance of building permits. Phasing of the culverts under Proctor Valley Road will be implemented with improvements Proctor Valley Road.

For the phasing of the required water quality basins, refer to Section 6.9, Table 22.

Table 7: Drainage Facilities Improvements

Phase	Drainage Facilities
South	• Secure and enter an agreement to construct prior to issuance of first grading permit in each phase. "(Phase Requirement #1)" • Secure and enter into an agreement to construct Basin #2 "(OS-1) "prior to issuance of grading permit." (Phase Requirement #2)" • Secure and enter into an agreement to construct Proctor Valley Road basins prior to issuance of Proctor Valley Road grading permit in each phase. "(Phase Requirement #4)"
Central	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2 • Secure and enter into an agreement to construct Basins #1 "(OS-70)" prior to issuance of grading permit. "(Phase Requirement #3)" • Satisfy Phase Requirement #4
North	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2 • Satisfy Phase Requirement #3 • Satisfy Phase Requirement #4

3.10 Drainage Facilities Financing

3.10.1 On-Site Facilities

County of San Diego policy requires that all development provide for the conveyance of storm waters throughout the Alternative Project to comply with County engineering standards. This will be accomplished by installing drainage infrastructure, by phase, and thus ensuring that needed facility is in place prior to or concurrent with development of the area which is affecting the natural drainage.

Installation of necessary drainage facilities in general accordance with this PFFP will be a condition of approval for any future development within the Alternative Project such that conformance with the adopted threshold performance standard will be maintained. As such, the Alternative Project will be required to enter into an agreement to secure and construct those facilities identified in this section prior to the issuance of grading permits in accordance with County Ordinance.

3.10.2 Off-Site Facilities

The Land Exchange EIR Alternative is not located within a County Special Drainage Area and therefore will not be responsible for payment of drainage fees to fund off-site facilities. Off-site improvements which are part of the construction of Proctor Valley Road will be funded by the developers. No other off-site drainage facilities are required.

4.0 Sewerage Facilities

4.1 Otay Ranch GDP/SRP Threshold

Provide a healthful and sanitary sewerage collection and disposal system for the residents of Otay Ranch to ensure that sewer collections do not exceed capacity.

4.2 Service Analysis

The Alternative Project is located in the unincorporated area of the County of San Diego and is not currently within the boundaries of a sewer service district. Service is proposed to be provided by the San Diego County Sanitation District ("SDCSD"). The County of San Diego and City of Chula Vista entered into a sewage Transportation Agreement (June 2016) which allows flows from the County of San Diego, including the Land Exchange Alternative, to be conveyed through the Salt Creek Interceptor. The existing agreement with the City and use of the Salt Creek Interception is limited to Otay Ranch Villages in the unincorporated area only. No other parcels outside of the Otay Ranch boundaries within the unincorporated area of the County can connect to the Salt Creek Interceptor.

Salt Creek Interceptor the closest sewer facility is the 15-inch trunk sewer located in Proctor Valley Road to the west of the Alternative Project. This trunk sewer conveys flows to the Salt Creek interceptor. From there, flows are conveyed to the City of San Diego Metropolitan sewer system. No other parcels outside of the Otay Ranch boundaries within the unincorporated area of the County can connect to the Salt Creek Interceptor.

The *Otay Ranch Facility Implementation Plan* assumed the Alternative Project would utilize the Salt Creek Interceptor and sewer lines downstream from the Alternative Project site. A more recent sewer service analysis, the *Overview of Sewer Service for Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative*, dated October 2017, by Dexter Wilson Engineering, Inc. confirmed that the preferred alignment is for sewer service to be provided by the Salt Creek Interceptor.

4.3 Alternative Project Processing Requirements

1. Identify location of facilities for on-site and off-site improvements, in conformance with the *Otay Ranch Village 14 and Planning Area 16/19 – Land*

Exchange EIR Alternative Overview of Sewer Service dated October 2017 by Dexter Wilson Engineering, Inc.

2. Provide cost estimates for all facilities and proposed financing responsibilities.

3. Identify financing methods for required improvements.

4.4 Existing Conditions

4.4.1 Existing Onsite Sewer Conditions

The subject property is presently in an undeveloped state. No sewer facilities presently exist within the site.

4.4.2 Existing Offsite Sewer Conditions

The Salt Creek Interceptor, located immediately west of the Alternative Project site, has been identified as the way to provide sewer service to the Alternative Project. This Interceptor line is owned and operated by the City of Chula Vista. This interceptor begins in Hunte Parkway, near the southern boundary of the Rolling Hills Ranch Alternative Project and follows Salt Creek and the Otay River Valley to the City of San Diego's Metropolitan Interceptor. The Salt Creek Interceptor ranges from a 15-inch to 48-inch line. The Salt Creek Interceptor has been sized to accommodate ultimate development in the service area, including the Alternative Project.

The existing location of the Salt Creek Interceptor is shown in Exhibit E. The June 2016 sewage transportation agreement between the City of Chula Vista and the SDCSD includes Village 14 and Planning Areas 16/19 as part of a mapped service area that is allowed to be served by the Salt Creek Interceptor under the agreement. County projects may convey up to 870,000 gpd of average sewage flow to the Salt Creek Interceptor under the agreement without any need for upgrades to the system. In establishing the flow limitation of 870,000 gpd, the County projected a total flow of 372,873 from Village 14 and Planning Areas 16/19. The current Alternative Projection is 367,182 gpd using City of Chula Vista criteria as required by the agreement.

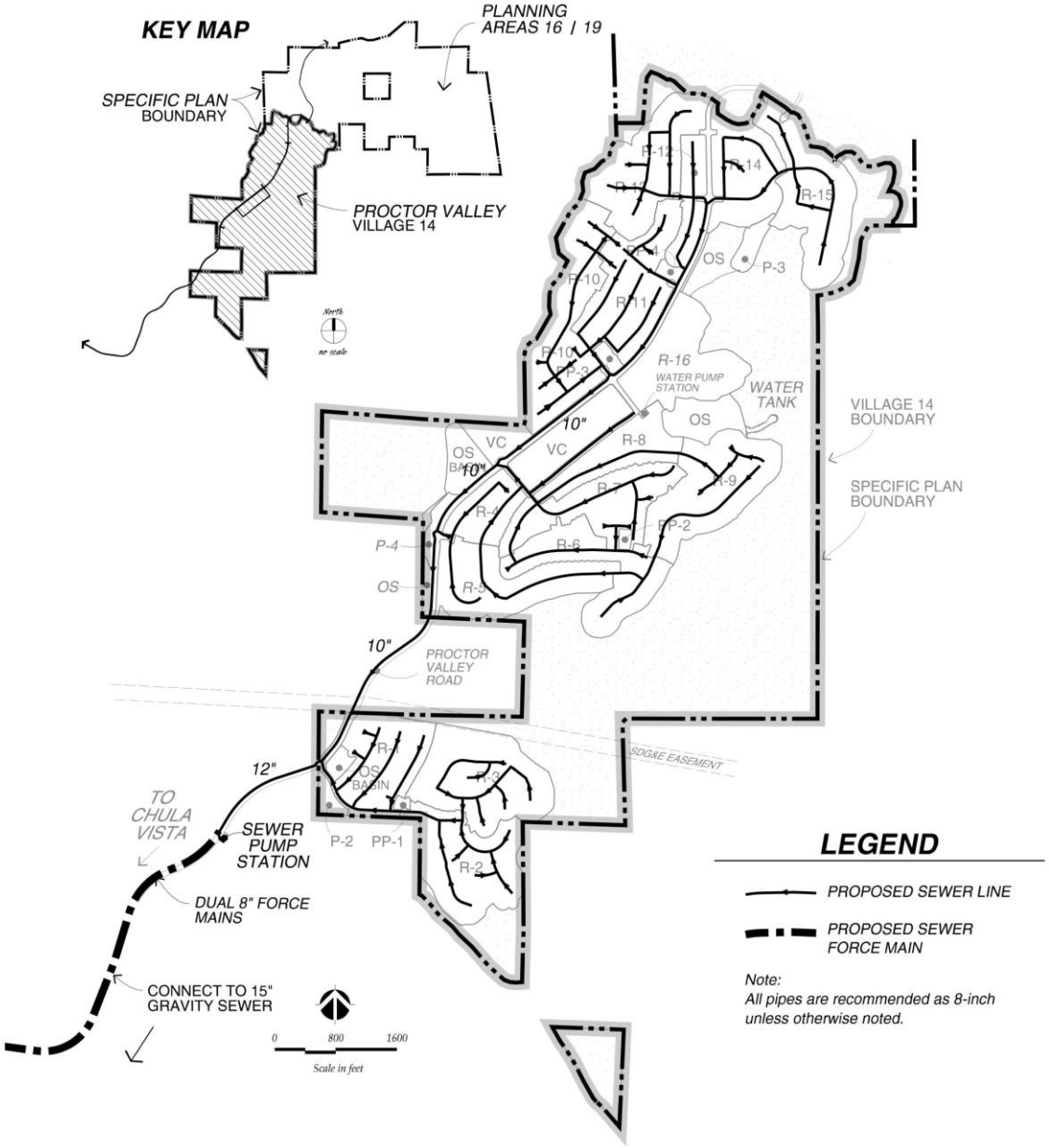


Exhibit E – Proposed Sewer Facilities

4.5 Alternative Project Demand and Proposed Facilities

4.5.1 Projected Alternative Project Demand

The Alternative Project is projected to create sewage demand of 1,596 EDU's (equivalent dwelling units) based on City of Chula Vista criteria. Chula Vista criteria will be used for estimating flows to the Salt Creek Interceptor per the sewage transportation agreement. The land use breakdown for this projection is shown on the following table.

Table 8: Alternative Projected Sewage Flows

Land Use Designation	Quantity	County Sewage Generation Factor	City Sewage Generation Factor	Total Average Sewage Flow, (GPD)
SF Residential	1,407 units	240 gpd/unit	230 gpd/unit	323,610
MF/MU Res.	123 units	192 gpd/unit	182 gpd/unit	22,386
Park	20.4 ac	500 gpd/ac.	410 gpd/ac	8,364
Public Safety	2.3 ac	500 gpd/ac.	1313 gpd/ac	3,020
School	800 ac	4.8 gpd/student	1181 gpd/ac	9,802
Total				**367,182**

4.5.2 Proposed On-site Sewage Facilities

The Alternative Project will construct an onsite sewer system to serve development in the community. This system will include onsite gravity sewer lines to collect and convey flows to an offsite lift station and associated force mains.

4.5.3 Proposed Offsite Sewage Facilities

A short section of gravity sewer is required to get flow to the lift station and from there sewage flows would be conveyed to the existing Salt Creek Sewer Interceptor along Proctor Valley Road. Sewer mains would be installed within Proctor Valley Road Right-of-Way and the 8-inch force mains would be installed to the existing 15-inch gravity main located in Proctor Valley Road, approximately 1,600 feet to the east of Hunte Parkway. The lift station is necessary to convey sewerage to the existing offsite sewer trunk lines. The lift station site and necessary easements will be conveyed to the County.

The County of San Diego does not have established detailed design standards for lift stations. On recent projects, the County has used City of San Diego Guidelines for lift

stations as a reference. Some of the pertinent criteria from the City of San Diego 2015 Sewer Design Guide are as follows:

- Dual force mains are required.
- Redundant pumping units are required.
- Pumping units shall be sized for peak wet weather gravity flow plus pumped flow of upstream lift stations, if any.
- Redundant power source such as diesel generator is required.
- Stations to include SCADA system to remotely notify County of station status and alarms.
- Overflow storage equivalent to 6 hours of peak influent gravity flow is required. Two hours is standard, but the City of San Diego requires six hours where maximum protection from spillage is required.
- Odor control system, Bioxide or equal, is required.
- Station to include adequate access and turn around space for large vehicles.

The lift station would be sized with capacity for the entire Land Exchange EIR Alternative site. The required capacity of the lift station is 662 gpm to accommodate peak gravity flows. The lift station would be designed to include redundant pumping units, standby power, odor control, overflow storage, and telemetry. The lift station site would also be designed with adequate access to all equipment items and include fencing for security. The lift station and force mains will be operated and maintained by the SDCSD to the point of connection with the City of Chula Vista gravity sewer system.

4.5.3 Wastewater Treatment

The SDCSD has sufficient capacity rights in the Metro sewer system to serve the Land Exchange EIR Alternative. The Alternative Project will bring Metro treatment capacity from the SDCSD through a Flow Transportation Agreement. The SDCSD will provide the conditions to secure Metro capacity.

4.5.4 Trunk Sewers

The design capacity is a standard for peak flows based on the sewer line's size. The design capacity flow rate is lower than actual sewer pipe capacities. Sizing facilities for design capacity as opposed to the actual flow capacity, establishes a conservative approach in the planning and design of the system.

4.6 Adequacy Analysis

Sewerage facilities necessary to accommodate projected sewer flows have been identified in conjunction with the *Overview of Sewer Service for Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative,* dated February 2018. County policy does not allow the design capacity of trunk sewer to be exceeded by flow volumes.

The construction of new sewer trunk lines within the Alternative Project site will be phased along with the construction of streets. As such, the facilities identified in this PFFP shall be required of the Developer either as constructed facilities, or through the payment of fees, which in turn will obligate the County to construct the necessary facilities.

In addition, the following conditions shall be satisfied by the developer of the Alternative Project.

1. Annexation into the SDCSD and Sphere of Influence by LAFCO (Government Code, 56000 et seq). Hereafter, the term "District" shall mean the SDCSD.

2. District approval of an Alternative Project sewer study that specifies the estimated Alternative Project sewage generation, proposed on-site and off-site sewerage infrastructure locations, alignments, and sizes, and a hydraulic analysis of the proposed sewerage facilities.

3. Satisfaction of all conditions of map approval and improvement agreements, including construction by the developer and acceptance by the District of on-site and off-site sewerage facilities, property, and easements.

4. Payment for all costs associated with easement acquisition, District annexation and sewer studies.

5. Payment for all District and City of Chula Vista sanitation fees and charges, as applicable.

6. Payment of City of San Diego transportation charges and metro sewer service fees, as applicable.

4.7 Inventory of Future Required Facilities

Main sewer facilities necessary to accommodate the Land Exchange EIR Alternative are listed on Table 9.

Table 9: Inventory of Major Sewerage Facilities

Sewerage Facility	Size	Funding
SALT CREEK		
Offsite Sewer Lift Station	662 GPM	Developer
Offsite Force Main	Dual 8″	Developer
Offsite Gravity Sewer to Lift Station	12″	Developer
ON-SITE SEWER LINES		
Sewer Lines in internal streets	Various	Developer

4.8 Threshold Compliance

Construction of the listed facilities and the payment of sewerage connection fees in accordance with the County ordinances will ensure compliance of the Alternative Project with the adopted threshold. The construction of new sewer trunk lines must be phased with construction.

4.9 Sewerage Facilities Improvement Phasing

Table 10 describes the phasing for sewerage facilities improvements in the Alternative Project. In addition to the facilities described in the table, sewer lines will be required to be installed in streets and connection made to the Salt Creek Interceptor prior to the issuance of building permits.

Table 10: Phasing of Sewerage Facility Improvements

Phase	Sewer Facilities Improvements
South	• Secure and enter into an agreement to construct offsite lift station prior to the approval of the First Final Map Alternative Project wide. "(Phasing Requirement #1)" • Secure and enter into an agreement to construct offsite gravity sewer and force mains prior to the approval of First Final Map Alternative Project wide. "(Phasing Requirement #2)"
Central	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2
North	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2

4.10 Financing Sewerage Facilities

Onsite improvements will be funded by the developers of the Alternative Project in accordance with the procedures and conditions applicable to the approved specific plan, tentative subdivision maps, final maps, and/or plot plans. The developers will enter into an agreement with the County to secure and construct these necessary improvements.

Agencies providing sewer services have a limited variety of funding sources to expand and/or upgrade their facilities to meet the increasing needs being placed on them. Among the funding options are sewer capacity charges, development fees, bonds, annexation fees, developer infrastructure financing including Community Financing Districts and other similar assessment mechanisms, and grants. Other sources of revenues for sewer facilities include establishment of a benefit assessment fee, redevelopment funds, special taxes, private donations and lease revenues.

4.10.1 San Diego County Sanitation District (SDCSD)

Alternative Project would pay appropriate annexation sewer fees for the SDCSD as shown in Table 11, if applicable.

Table 11: SDCSD Annexation Fee

Jurisdiction	Fee Amount	Ac's	Estimated Fees
San Diego County Sanitation District	$1,000/Ac	598.7 Ac.	$598,700
San Diego County Sanitation District	$2000/EDU	1,578 EDUs	$ 2,302,000
TOTAL	**-**		**$591,700**

4.10.2 Salt Creek Interceptor

The Salt Creek Basin impact fees that would be paid by the Proposed Project are shown in Table 12. Salt Creek Basin Impact Fees (subject to changed or updating by the City of Chula Vista) paid by future developments within the Salt Creek Drainage Basin, fund improvements required to serve ultimate development within the basin. The SDCSD will need to pay the fees for capacity in the Salt Creek Interceptor as part of the Sewage Transportation Agreement with the City of Chula Vista.

Table 12: Salt Creek Basin Impact Fees

Land Use	Fee Amount (these fees were adjusted 2015)	Units/ Ac.	Estimated Total Fee
Single Family Residential	$1,330/unit	1,407 units	$ 1,871,310
Multi-Family Residential	$997.50/unit	123 units	$ 122,693.5
Commercial	$13,300/acre	3.5 acres	$46,550
Public Safety Site	$13,300/acre	2.3 acres	$30,590
Schools	$5,320/acre	8.3 acres	$ 44,156
Park	$2,660/acre	20.4 acres	$54,264
Salt Creek Basin Total			**$2,169,563.5**

In addition, Alternative Projects flowing through the City of Chula Vista are required to pay a Wastewater Capacity Fee. This fee includes the costs for treatment capacity and Pipeline Expansion. Because the Alternative Project is receiving treatment capacity through the SDCSD, the Alternative Project is only subject to the Pipeline Expansion portion of the Wastewater Capacity Fee. This fee is shown in Table 13.

Table 13: City of Chula Vista Wastewater Capacity Fees

Fee Amount (Pipeline Expansion)	EDU	Estimated Fee
$174.80/EDU	1,530	$369,876.80

5.0 Transportation Systems Facilities

5.1 Otay Ranch GDP/SRP Threshold

Maintain Level of Service (LOS) "D" or better, as measured by observed average travel speed on all signalized arterial segments.

5.2 Service Analysis

5.2.1 Levels of Service Standards

The County, through the Department of Public Works, is responsible for ensuring that traffic improvements are provided to maintain a safe and efficient street system within the County. Through Alternative Project review, County staff ensures the timely provision of adequate local circulation system improvements in response to planned development while maintaining acceptable levels of service. Planned new roadway segments and signalized intersections will maintain acceptable standards at the build-out of the *San Diego County General Plan Mobility Element*. General coordination on traffic assignments, improvements and volumes with adjacent jurisdictions is necessary in order to properly assess compliance with the threshold.

The traffic threshold will be analyzed by the following:

1. Level of Service (LOS) measures shall be for the average weekday peak hour, excluding seasonal and special circumstance variations.
2. The measurement of LOS shall be by the 2010 *Highway Capacity Manual* (HCM) method of calculation, using the County's published Mobility Element design standards.
4. Circulation improvements shall be implemented prior to the anticipated deterioration of LOS below established standards.

5.2.2 Background Traffic Studies

The *San Diego County General Plan Mobility Element* serves as the overall facility master plan. County transportation planning has been, and continues to be, coordinated with the City of Chula Vista and other cities in the region to ensure regional-serving roadways common to multiple agencies are planned to meet the anticipated demand in all areas, and that widths and alignments are compatible.

The *Proctor Valley Village 14 & Preserve Traffic Impact Analysis* (January 2018), prepared by Chen Ryan Associates, addresses both existing and planned circulation system conditions. The study details necessary improvements and outlines the incremental circulation improvements based upon planned Alternative Project phasing. The study also includes an evaluation of impacts that are considered significant as a result of the Alternative Project development.

5.2.3 Freeway Segments

The California State Department of Transportation (Caltrans) recommends LOS C or better as acceptable for freeways.

5.2.4 Arterial Roadway Segments

The County recommends that arterial segments located in largely undeveloped areas maintain LOS D or better. The City of Chula Vista requires LOS C for most roadways within the City boundaries.

5.2.5 Peak Hour Intersections

While roadway LOS based on daily traffic volumes are useful as a general indication of traffic operating conditions, peak hour operations at major signalized intersections provide a more definitive measure of the actual functional capacity of the circulation network. It is for this reason that intersection performance, which relates to the ability of signalized intersections to operate at acceptable LOS during peak hours, is considered the primary determinant of adequate operations. For peak hour intersection operations, LOS D or better is considered acceptable.

5.3 Alternative Project Processing Requirements

1. Identify phased traffic demand and demonstrate compliance with the *San Diego County General Plan Mobility Element.*
2. Identify on-site and off-site impacts and improvements by phase of development.
3. Provide cost estimates for all improvements.

5.4 Existing Conditions

The Alternative Project site is located along Proctor Valley road north of the City of Chula Vista city limits, in Jamul/Dulzura Subregional Plan area of the unincorporated area of the County. Existing Proctor Valley Road is a 2-lane undivided roadway that extends from the City of Chula Vista's eastern boundary to the community boundary of Jamul, in the County. In its current state, Proctor Valley Road is in various stages of improvement (i.e. paved or dirt). Proctor Valley Road from the northern Alternative Project boundary at Melody Road to approximately 1.3 miles south within the Alternative Project site is paved and improved. At that point, there is two tenths of a mile stretch that is dirt. The pavement continues for approximately eight tenths of a mile into the northern portion of Village 14. From that point the quality of the road is deteriorated pavement for approximately 2.5 miles (traverses through a small section of City of San Diego property) to the intersection of Proctor Valley Road and Northwoods Drive in the City of Chula Vista. The roadway will be improved in conjunction with the development of the Alternative Project site.

Regional access to the Alternative Project site is provided by State Route 125 (SR 125), located approximately three miles to the west. Interstate 805 (I-805), approximately eight miles to the west, provided secondary north/south access. SR-54, located approximately six miles to the northwest, connects to SR-125 and I-805, and provides regional east/west access. SR-94, located approximately 3 miles to the northeast, provides access from the east through the Jamul Community.

The *San Diego County General Plan Mobility Element – 2011* classifies Proctor Valley Road (or a future parallel street of sufficient design to handle Alternative Projected build-out traffic levels) as an ultimate 2-Lane Light Connector (2.2E) Roadway between the City/County boundary and the Jamul Community boundary. The Otay Ranch GDP/SRP currently classifies Proctor Valley Road as a 4-Lane Major Road way between the City of Chula Vista boundary to SR-94 in Jamul. Currently, most study area intersections operate at LOS D or better, with the exception of the SR-94 / Lyons Valley Road intersection, which operates at LOS F during both the AM and PM peak hours.

5.5 Alternative Project Demand and Proposed Facilities

5.5.1 Trip Generation and Assignment

The Alternative Project includes residential development, an elementary school site, parks, and residential support uses. Access points along Proctor Valley Road would

provide vehicle access to and from the residential areas. The planned Alternative Project roadway network will provide for internal circulation within the Alternative Project area. Table 14 demonstrates the estimated daily weekday vehicle trips Alternative Projected from the land uses proposed on the site.

Table 14: Alternative Project Model Land Use Assumptions & Trip Generation

Land Use	Units/ Ac's	Note	Weekday Vehicle Trips
Single Family Detached Housing	1,124 DU	10/DU	9,550
Mixed Use: Commercial /Residential	54 DU	5/DU	2,440
Multi-Family (6-20 DU/Acre)	69 DU	8/DU	552
Retirement Community	283 DU	4/DU	1,192
Mixed Use: Commercial /Retail	15,000 SF	110/KSF	1,650
Elementary	8 Acres	90/Acre	720
Neighborhood/County Park (Undeveloped)	13.5 Acres	5/Acre	56
Community Facilities	5.6 Acres	30/Acres	168
Fire Station	3 Staff	5.33/Staff	16
Total Trips Generated for the Alternative Project			16,344

As demonstrated in the table above, it is anticipated that the Alternative Project will result in a total vehicular trip generation of 15,815 ADT. Given the nature of the land uses, trips were disaggregated into those which would remain within the Alternative Project site (internally captured) and those which would leave the Alternative Project site (external trips). Estimates for internal versus external trip generation percentages were developed based upon Alternative Project trip generation estimates from the San Diego Regional Planning Agency ("SANDAG") model. Internal capture was estimated at 1,898 ADT. Only external trips (estimated at 13,917) were distributed and assigned to the study area roadways.

5.5.2 Future Volumes and Planned Roadway Classifications

Pursuant to the *San Diego County General Plan Mobility Element*, Proctor Valley Road is classified as a 2-Lane Light Collector (2.2E) and will be modifies to either a 2.2A or 2.2E classification within the Alternative Project as noted below. The Otay Ranch GDP/SRP alignment will be amended accordingly.

In order to minimize the potential environmental impacts to the City of San Diego, the Land Exchange EIR Alternative will construct Proctor Valley Road as a light connector with a raised median (2.2A) between its current eastern terminus point within the City of Chula Vista to Alternative Project Driveway #6, light connector (2.2E) between Alternative Project Driveway #6 and the Village 14 Boundary, and two-lane interim roadway between the Village 14 Boundary and its current western terminus point located in Jamul Community. The proposed improvements to Proctor Valley Road between its current eastern terminus point within the City of Chula Vista to Alternative Project Driveway #6 will exceed the current requirements set forth in the *San Diego County General Plan Mobility Element.*

5.6 Adequacy Analysis

The adequacy of the traffic system is based upon the *Otay Ranch Village 14 and Planning Area 16/19 - Land Exchange EIR Alternative*, prepared by Chen Ryan Associates. This study provides a cumulative analysis of the existing and anticipated traffic volumes in the region in order to provide for increased traffic levels that will result from development of the Alternative Project in combination with other planned land uses. These analyses were based upon a computer generated "Select Zone" study utilizing the adopted SANDAG Series 11 Year 2020, 2025, and 2030 Transportation Forecast. It should be noted that this scenario does not include the remaining undeveloped dwelling units, outside of the Land Exchange Alternative, within the Otay Ranch Village 14 allowed by Otay Ranch GDP/SRP.

5.6.1 Street Segments Influenced by the Proctor Valley Alternative Projected Traffic

Since the Land Exchange EIR Alternative land uses are less than those provided for in the County General Plan, the Land Exchange EIR Alternative is necessarily consistent with the General Plan and no long-range General Plan consistency assessment is required for the Land Exchange EIR Alternative. Therefore, intersection, roadway segment, freeway mainline, and ramp analyses in this section are limited to the facilities within the City of Chula Vista

The Select Zone assignment generated by the SANDAG Year 2030 model results in a distribution of the total number of projected Alternative Project vehicular trips anticipated to utilize freeway and arterial roadway segments within the area of influence of the Alternative Project.

The Select Zone model output from SANDAG shows future year 2030 daily segment volumes on all facilities in the vicinity of the Alternative Project. The County also requires that an assessment be conducted consistent with the Congestion Management Program which necessitates analysis of all key segments which carry Alternative Project trips of 50 or more peak hour trips (in either direction) on roadways and carry 150 or more peak hour trips (in either direction) on freeway links.

5.6.2 Future Year 2030 Analysis (Intersections Over Volume Threshold)

All study area intersections would operate at acceptable LOS D or better during the AM and PM peak hours, with the exception of the intersection at Northwoods Drive/Agua Vista Dr. & Proctor Valley Road, which would operate at an unacceptable LOS F during the PM peak hour. This intersection would be considered to be a direct impact by the Alternative Project traffic.

5.6.3 Future Year 2030 Analysis (Street Segments Over Volume Threshold)

Six existing roadway segments within the City of Chula Vista would operate at LOS D, or F as follows: ***(From p. 190 of the TIS)***

- East H Street, between Terra Nova Drive and Del Rey Boulevard (LOS D)
- East H Street, between Del Rey Boulevard and Paseo Del Rey (LOS D)
- East H Street, between Paseo Del Rey and Paseo Ranchero (LOS D)
- East H Street, between Otay Lakes Road and SR-125 SB Ramps (LOS D)
- Proctor Valley Road, between Northwoods Drive to the City of Chula Vista Boundary (LOS E at PM peak hours/LOS F at AM peak hours)
- Otay Lakes Road, between the SR-125 NB Ramps and Eastlake Parkway (LOS D)

The roadway segment of Proctor Valley Road, between Northwoods Drive and the City of Chula Vista Boundary is anticipated to have Project specific impact. All other roadways listed above are not anticipated to be impacted by the proposed Land Exchange EIR Alternative.

County of San Diego Impacts (Cumulative) – The Land Exchange Alternative was identified to have a significant cumulative impact along the following three (3) segments of Proctor Valley Road, which are located along the project frontage:

- *Proctor Valley Road, between the City of Chula Vista Boundary and Project Driveway #1;*
- *Proctor Valley Road, between Project Driveway #1 and Project Driveway #2; and*
- *Proctor Valley Road, between Project Driveway #2 and Project Driveway #3.*

As mitigation, the Land Exchange Alternative applicant will pay the appropriate Transportation Impact Fee (TIF). However, utilizing the daily roadway segment volume to capacity analysis method, the three identified segments are projected to continue to operate at substandard LOS E under Year 2025 conditions even after they are constructed to their ultimate classification as 2.2A facilities.

5.6.4 Future Year 2030 Analysis (Two-Lane Highways Over LOS Threshold)

All two-lane highway segments analyzed under this scenario are projected to operate at LOS D or better with the addition of Land Exchange EIR Alternative traffic, with the exception of SR-94 between Vista Sage Lane and Lyons Valley Road, which is projected to operate at LOS E.

5.6.5 Future Year 2030 (Freeway and State Highway Segments Operating Over Capacity Threshold)

Most studied freeway and state highway segments would continue to operate at LOS D or better under with the exception of the following segments:

- I-805, between Home Avenue and SR-94 (LOS F)
- I-805, between SR-94 and Market Street (LOS F)
- I-805, between Market Street and Imperial Avenue (LOS F)
- I-805, between Imperial Avenue and E Division Street (LOS F)
- I-805, between E Division Street and Plaza Boulevard (LOS F)
- I-805, between Plaza Boulevard to SR-54 (LOS F)
- I-805, between SR-54 and Bonita Road (LOS F)
- I-805, between Bonita Road and East H Street (LOS F)
- I-805, between East H Street and Telegraph Canyon Road (LOS F)
- SR-125, between SR-94 Junction and Jamacha Road (LOS F)

- SR-125, between Jamacha Road and Paradise Valley Road (LOS E)
- SR-54, between I-805 and Reo Drive/Plaza Bonita Center Way (LOS F)

Based on the freeway mainline significance criteria outlined in Section 2.8 of the transportation impact Study, the traffic associated with the Land Exchange EIR Alternative would not cause any significant changes in roadway segment operations under Year 2030 conditions. Therefore, no significant Land Exchange EIR Alternative related impacts were identified and no mitigation is required.

5.6.6 Future Year 2030 (Freeway Ramp Intersections Operating Over Capacity Threshold)

All study area freeway ramp interchange intersections are projected to operate at or under capacity under Year 2030 conditions, with the exception of I-805 SB / H Street, which would be over capacity during both the AM and PM peak hour.

5.7 Inventory of Required Traffic Improvements

As a result of the build-out traffic impacts analysis above, the following table demonstrates the traffic improvements required for intersections impacted by Alternative Project-related traffic under Future Year 2030 "worst case" assumptions. Subject to installation of these improvements, the Alternative Project will comply with the thresholds for transportation service facilities.

Based upon the results of the above analysis, improvements to the Northwood Drive/Agua Vista Driver & Proctor Valley Road intersection would be a requirement of the Alternative Project.

Table 15: Required Build-out Intersection Improvements – Future 2030 Cumulative Conditions

Intersection	LOS Before Mitigation (AM/PM)	Mitigation	LOS After Mitigation (AM/PM)
Northwoods Drive/Agua Vista Dr. & Proctor Valley Road	F/F	Construction of signalized intersection by the 327th building permit	B/B

The Land Exchange EIR Alternative would impact one (1) roadway segment located in the City of Chula Vista under Year 2030 conditions. Additional information regarding traffic impacts and potential mitigation measures can be found in Otay Ranch Village 14 and Planning Area 16/19 - Land Exchange EIR Alternative *Traffic Impact Analysis* (February 2018), prepared by Chen Ryan Associates.

5.8 Threshold Compliance

Based upon the traffic analysis prepared for the Alternative Project, threshold compliance is projected to be maintained with implementation of the improvements identified in this PFFP.

5.9 Phasing Transportation Facilities

Improvements to existing roads and construction of new roadways are required for implementation of the Alternative Project. The following phasing tables describe the phasing of improvements for each transportation facility required by the Alternative Project.

Table 16: Required Build-out Street Segment Improvements Phasing

Phase	Road Improvements (Proctor Valley Road)
South	• Secure and enter into an agreement to construct Proctor Valley Road ("PVR") offsite from the existing terminus in the City of Chula Vista at North woods Drive/Agua Vista Drive to the southerly edge of the South Phase prior to approval of First Final Map Alternative Project wide. "(Phasing Requirement #1)" • Secure and enter into an agreement to construct PVR onsite from the southerly edge of the South phase to Street N prior to approval of First Final Map Alternative Project wide. "(Phasing Requirement #2)"
Central	• Secure and enter into an agreement to construct PVR offsite from Street N to the southerly edge of the Central phase prior to approval of First Final Map in the phase. "(Phasing Requirement #3)" • Secure and enter into an agreement to construct PVR onsite from the southerly edge of the Central phase to street RR prior to approval of First Final Map in the phase."(Phasing Requirement #4)" • Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2

Phase	Road Improvements (Proctor Valley Road)
North	• Secure and enter into an agreement to construct PVR onsite from street RR to the northerly boundary of the North phase prior to approval of First Final Map Alternative Project wide. "(Phasing Requirement #5)" • Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2 • Satisfy Phase Requirement #3 • Satisfy Phase Requirement #4

On-site Backbone Road Improvements

Implementation of the Alternative Project will require the construction of on-site roads. The following table describes the phasing for the onsite road improvements.

Table 17: On-Site Transportation Facilities Improvements Phasing

Phase	On-site Backbone Road Improvements
South	• Secure and enter into an agreement to construct Streets A and N from PVR to Street J prior to approval of final map in each phase.
Central	• Secure and enter into an agreement to construct Street R from PVR to Street S, Street Z from PVR to Street AA, Street GG from PVR to Street JJ and Street Y from Street Z to Street X prior to approval of final map in each phase.
North	• Secure and enter into an agreement to construct Street RR from PVR to Street OO, Street DDD from PVR to Street CCC and Street UU to the boundary of R-13 prior to approval of final map in each phase.

5.10 Financing Transportation Facilities

Construction of the above listed improvements will constitute the necessary financing of transportation facilities. These improvements will be funded through the developer(s) entering into agreements to secure and construct the improvements prior to recordation of the applicable Final Map. Onsite transportation facilities will be funded and constructed by the Alternative Project developers.

Off-site improvements in the County are funded through the County TIF program. Proctor Valley Road, however, is not a County TIF facility. Proctor Valley Road off-site within the City of Chula Vista is a TDIF program funded by the City of Chula Vista. The entirety of the Proctor Valley Road will be constructed by the Developer.

6.0 Urban Runoff Facilities

6.1 Otay Ranch GDP/SRP Threshold

An urban runoff diversion system shall be designed to ensure the protection of water quality within Otay Reservoir System.

6.2 Service Analysis

The County is responsible for ensuring all runoff water conveyed in the proposed storm drain systems will be treated in compliance with Regional Water Quality Control Board (RWQCB) regulations and National Pollution Discharge Elimination System (NPDES) minimum criteria prior to discharging into natural watercourses.
In accordance with RWQCB Order No. R9-2013-0001, as amended by R902015-001 and R9-2015-0100, dated January 24, 2015, waste discharge requirements for discharges of urban runoff from municipal storm drainage systems shall not contain pollutant loads which cause or contribute to a violation of receiving water quality objectives or which have not been reduced to the maximum extent practicable. Post-construction Best Management Practices (BMPs), which refer to specific storm water management techniques, are required for each project within the jurisdiction of the County. BMPs are necessary in order to manage construction and post-construction site runoff and minimize soil erosion and other pollutants from being transported downstream once they have been loosened by storm water. Post-construction pollutants are a result of the urban development of property and the effects of automobile use. Runoff from paved surfaces can contain soil sediment and a variety of pollutants transported by the water and sediment. Landscape activities and chemicals used by homeowners and commercial enterprises are an additional source of sediment and pollutants.

Detailed analysis of Alternative Projected urban runoff impacts for the Alternative Project has been conducted by Hunsaker and Associates, *Storm Water Quality Management Plan for Otay Ranch Village 14 and Planning Areas 16/19- Land Exchange Alternative*, dated February 2018, and the CEQA Drainage Study for Otay Ranch Village 14 and Planning Area 16/19- *Land Exchange Alternative*, also by Hunsaker and Associates, dated February 2018. The observations, analysis and conclusion of these studies are incorporated into this PFFP.

6.3 Alternative Project Processing Requirements

1. Identify urban runoff facility demand (by phase).
2. Identify locations of facilities for on-site and off-site improvements.
3. Provide cost estimates.
4. Identify financing methods.

6.4 Existing Conditions

The planning area for Proctor Valley Village 14 consists of steep canyons which drain westerly towards Proctor Valley which is the major natural drainage-way which flows in southwesterly direction and empties into the Upper Otay Reservoir. Overflow from the Upper Otay Reservoir empties into the Lower Otay Reservoir which is created by the Savage Dam. The Alternative Project covers approximately 2,348 acres directly above Upper Otay Reservoir.

Runoff from the Land Exchange EIR Alternative site currently flows to Proctor Valley which acts as a natural drainage way directing flows in a southwesterly direction towards the Upper Otay Reservoir. Proctor Valley Road runs parallel to this natural drainage way and currently has minimal, if any, drainage facilities. Runoff from the undisturbed canyons east of Proctor Valley sheet flow over Proctor Valley Road en route to Proctor Valley. In some instances, runoff is conveyed within a storm drain culvert underneath Proctor Valley Road. Surface runoff from the Land Exchange EIR Alternative will enter the Upper Otay Reservoir.

The proposed development is not expected to cause adverse effects to the Upper Otay Reservoir due to the anticipated lower total dissolved solids ("TDS") concentration in the Alternative Project irrigation compared with the TDS at the reservoirs outfall, the use of source control best management practices ("BMPs"), and the decrease in overall erosion potential due to reduced natural areas.

6.5 Alternative Project Demand and Proposed Facilities (Developed Condition)

6.5.1 Post Development Runoff

Development of the Alternative Project will result in an increase in runoff from the site. The increase in runoff is due to the increased impervious area within the development.

The acreage of Post-Development Alternative Project runoff characteristics is estimated on the following table:

Table 18: Land Exchange EIR Alternative Runoff Characteristics

Description of Area	Acres
Designated Open Space and Preserve	1,757
Developed Area (including off-site Proctor Valley Road)	591
Total	**2,348**

Natural runoff from most areas north of the Alternative Project site will be separated from the developed site runoff via separate storm drain systems. Runoff from the Land Exchange EIR Alternative Site will discharge into Proctor Valley. The runoff from the 85th percentile storm as defined by the San Diego County BMP Design Manual and drier weather runoff from developed areas of the Land Exchange EIR Alternative Site will be diverted to the five Water Quality Basins. Development of the site will not cause any diversion to or from the Upper Otay Reservoir watershed.

Runoff from the developed portions of the site will be collected via the proposed drainage system consisting of curb inlets, catch basins, headwalls, cleanouts, and storm pipe. The runoff will be conveyed towards one of the proposed water quality basins. For clarity in the remaining portion of this chapter, the general term of 'water quality basin' is used to define the proposed structural BMP basins rather than the more specific basin classifications such as retention, partial retention, or biofiltration. The water quality basins will function as a structural treatment BMPs as well as to address flow control hydromodification. For the larger water quality basins, where it may not be feasible to discharge the peak flowrate, a diversion structure will be located upstream of the basin to bypass flowrates in excess of the Q10 rainfall event. This flowrate corresponds to the upper flow control (HMP threshold). Once routed through the basin or other respective treatment facilities, flows are discharged into the natural drainage courses such as Proctor Valley then ultimately empty into the Upper and Lower Otay Reservoirs. The performance of the Water Quality Basins is described in depth in the *Storm Water Quality Management Plan for Otay Ranch Village 14 and Planning Areas 16/19- Land Exchange Alternative*. Since the capacity of Upper Otay Reservoir is sufficient to convey the proposed peak flow increases, and since the City of San Diego Water Department which manages the reservoirs generally desires greater volumes and no reductions within the reservoirs, no onsite peak flow detention basins are proposed as part of this development. Culverts will be constructed as necessary to convey the projected 100-year peak flow from the developed areas under Proctor Valley Road Culverts will be

constructed as necessary to convey the Alternative Projected 100-year peak flow from the developed areas under Proctor Valley Road.

At the downstream end of the internal storm drain systems, culvert crossings at Proctor Valley Road will be constructed to prevent roadway overtopping during the 100-year design event. Table 19 summarizes the 100-year developed condition peak flows to each of the discharge locations at Proctor Valley Road.

Table 19: Post Development Volume Based 85th Percentile Calculations

Watershed	Drainage Area	85th Percentile Rainfall (Inches)	Required Treatment Design Surface Area (ft^2)	Storage Surface Area Provided (ft^2)
Basin 1	385.85	0.52	160,200	160,200
Basin 2	140.98	0.52	49,200	49,200
Basin 3	4.63	0.52	4,231	4,231
Basin 4	3.4	0.52	3,379	3,379
Basin 5	6.64	0.52	5,192	5,192
Basin 6	1.29	0.52	2,700	2,700
Basin 7	1.16	0.52	2,300	2,300
Basin 8	0.22	0.52	160	160
Basin 9	0.16	0.52	160	160

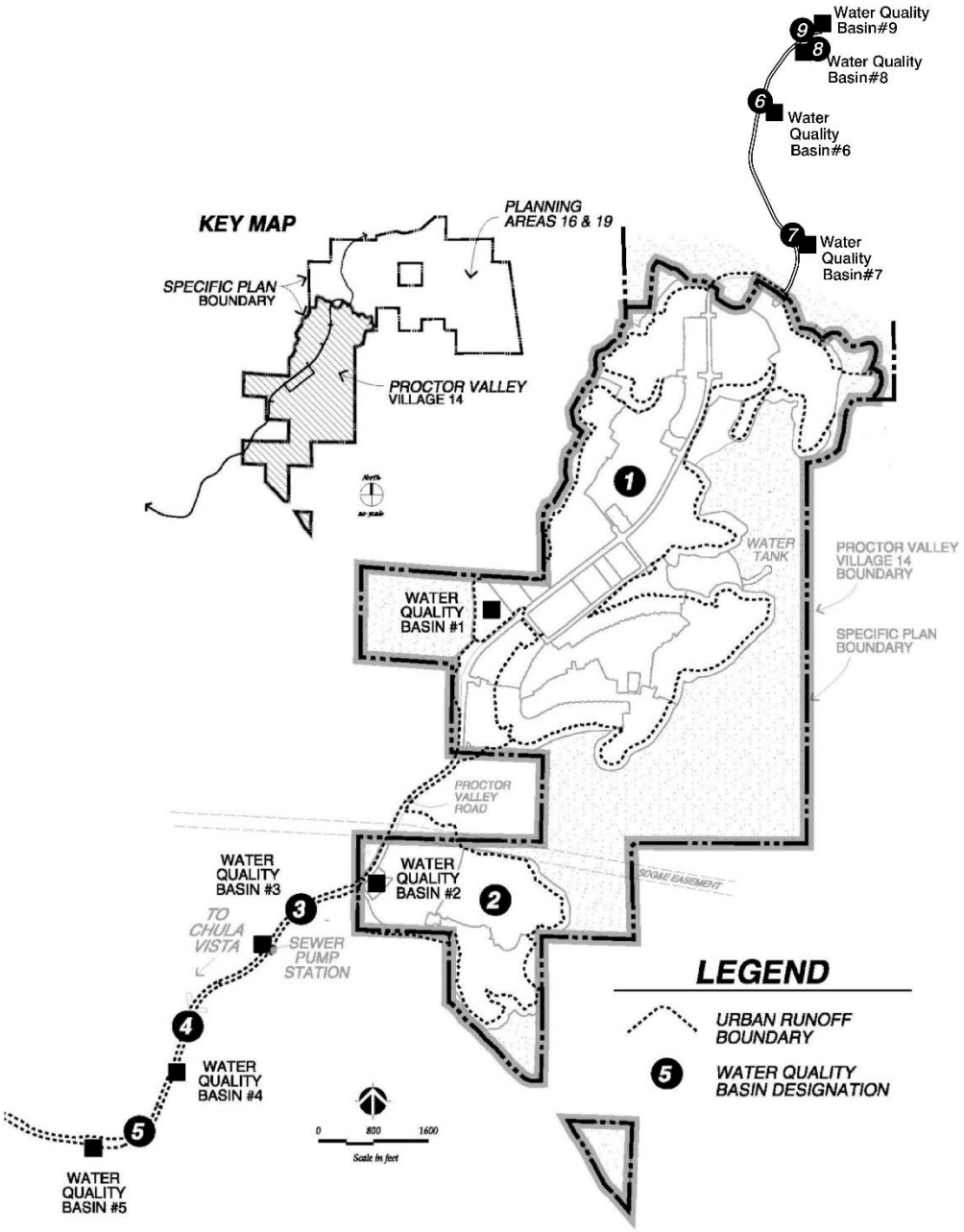


Exhibit F – Proposed Urban Runoff Facilities

6.5.2 Post Development Pollutant Impacts

Urban runoff from the developed condition of the Alternative Project site will increase the quantity of runoff from the site, and thus has the potential to contribute pollutants into Upper Otay Reservoir. These pollutants could include sediment, oil, grease, suspended solids, metals, nutrients, pesticides, bacterial viruses, other organic compounds, and other debris.

Runoff from the developed portion of the Alternative Project site will drain towards one of two water quality basins via internal storm drain systems. These basins will receive the runoff from the majority of the areas with proposed development. Seven roadside water quality basins and four biofiltration facilities along Proctor Valley Road South will be constructed to treat runoff from the Alternative Project prior to discharge into Upper Otay Reservoir.

Runoff from the proposed development would be treated within each basin during the time it takes to drain completely. Treatment would include the settling of pollutants within the basins and filtering through the heavy vegetation at the bottom of each basin. A trash and debris rack would be fitted to the base of each structure to prevent clogging of the low-flow orifices. In this way, stormwater pollutant, trash and debris removal would occur prior to discharge into Upper Otay Reservoir.

The flow rate routed through each basin will vary based on its ability to accommodate either the peak Q100 flowrate or the Q10 rain event associated with flow control hydromodification. For example, the larger basins will be limited to Q10 flows. An upstream diversion structure will direct Q10 flows towards the basin while allowing the higher Q100 peak flows to bypass the respective basin. The basin outlet structure will be sized on discharging the Q10 rain event. In instances where peak Q100 flows will be routed through the respective water quality basin, their outlet structure would be sized and designed to convey runoff from the 100-year storm event. This will typically occur within the smaller basins which can accommodate Q100 peak flowrates.

The Alternative Project's bioretention water quality basins (bioretention basins and vegetated roadside swales), provide a high removal efficiency for course sediment, trash and debris, a high removal efficiency for pollutants that tend to associate with fine particles during treatment including fine sediment, undissolved nutrients, heavy metals, organic compounds, oxygen demanding substances, bacteria, oil and grease, and pesticides, while providing medium pollutant removal efficiency for dissolved nutrients. The Alternative Project's high-rate biofilters provide a high removal efficiency for course sediment, trash and debris, a medium pollutant removal efficiency for pollutants that

tend to associate with fine particles during treatment including fine sediment, un-dissolved nutrients, heavy metals, organic compounds, oxygen demanding substances, bacteria, oil and grease, and pesticides, and low pollutant removal efficiency for dissolved nutrients. Finally, the remainder of the Alternative Project's developed/disturbed areas consisting of vegetated and irrigated slopes within the Alternative Project's development footprint that will not receive runoff from the Alternative Project's streets and roads and will be self-treating and natural landscaped slopes.

Table 20 provides an estimate of runoff quantities for the undeveloped and developed conditions of the Alternative Project. As the table demonstrates, the watershed post and pre development are very similar.

Table 20: Pre and Post-Development 100 Year Peak Flows

Discharge Junction	Existing Drainage area to Junction (acres)	Existing Drainage Area (cfs)	Post-Development Drainage (cfs)
J001	953.77	1,528	1,528
J003	2,775.71	4,928	4,977
J004	4,001.52	7,076	6,925
J005	5,372.63	9,660	9,922
J007	6,111.18	10,955	11,222
J008	6,223.71	10,991	11,219
J009	6,880.65	12,036	12,372

6.5.3 Biofiltration Based Best Management Practices

The Alternative Project includes seven water quality basin BMPs. BMPs shall be designed to mitigate the volume of runoff produced from a 24-hour 85th percentile storm event, as determined from the local historical rainfall record. Such facilities are usually designed to store the first flush runoff event below the principle spillway elevation (riser, weir, etc.) while providing a means for low flow dewatering.

The runoff contained below the overflow elevation of the basin riser will be slowly discharged from the treatment control basin via low flow orifice(s) in the basin riser. After passing through the riser, an outlet pipe will dewater the basin and discharge runoff to the receiving storm drain.

Runoff will be collected and treated in the Water Quality Basin within the area between the basin bottom elevation and the peak flow riser opening. Treatment will be addressed

primarily through the settling of pollutants within in the basin and filtering through the heavy vegetation at the bottom of the basin.

Dewatering will occur via one or more low flow orifice built into the side of the riser structure within each basin. Such orifices, located at subgrade with an invert elevation coincident with the basin bottom elevation, will provide the runoff with a 24 to 96 hour residence time prior to full basin dewatering. A trash and debris rack will be fitted to the base of the structure to prevent clogging of the low flow orifice.

Basin structures will be designed to convey runoff diverted from the main storm water system to the basins. Storm water treatment will occur prior to discharge to any downstream receiving water body supporting beneficial uses.

The elevations for the orifices within the basins have been preliminary determined (via a stage-storage calculation) for attainment of the appropriate water quality volume for each basin.

The basins have been designed such that runoff in excess of the first flush volume will bypass the basin via either a large diameter riser opening or a diversion structure located upstream of the basin. Further, natural drainage courses downstream of the outlet will be protected from erosive velocities with appropriately designed velocity control structures such as rip rap aprons or energy dissipaters.

6.5.4 Urban Runoff Control Basins

The Alternative Project residential development will cover approximately 591 acres. Approximately 1,757 acres will remain in their natural, undeveloped condition within the area. Two water quality basins are proposed to control runoff from the developed portion of the Alternative Project site. These basin locations are shown on Exhibit F.

Additional detailed information of exactly how the Alternative Project will comply with water quality requirements will be provided as part of the final engineering review process. In this manner, the type, location, cost and maintenance obligation of the selected BMPs will be given consideration during the Alternative Project planning and design. The County requires that prior to approval of any tentative map and/or site plan for the Alternative Project, the applicant shall obtain the approval of a water quality technical report containing specific information and analysis on how the Alternative Project will meet the requirements of the County of San Diego Storm Water requirements by the County Engineer. Ultimate development of the Alternative Project will incorporate a Post-Construction Storm Water Operation and Management Plan.

6.5.5 Construction

During the construction phase, the Alternative Project will be subject to the requirements of the General Construction Permit. Development of the Alternative Project will comply with the requirements of this permit through implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP) for each planning area and by incorporating temporary BMPs for the control of sediment and other pollutants.

6.6 Adequacy Analysis

Nine (9) water quality basins and four (4) roadside biofiltration facilities will be designed of an adequate size to handle the necessary treatment volumes of the proposed development and thus will adequately address pollutants generated by the development within the Alternative Project. Subject to installation of these storm water treatment BMP's, the Alternative Project will show compliance with storm water requirements.

As a result of the fact that the capacity of Upper Otay Reservoir has been determined to be sufficient to convey the proposed peak flow increases, since the City of San Diego Water Department has indicated that they desire greater volumes towards the reservoirs, no onsite detention basins are proposed as part of this development. Culverts under Proctor Valley Road will be adequately sized to convey the projected 100-year peak flow from the developed areas

As a result of the above factors, the following conditions shall be required of the developer of the Alternative Project:

1. The Alternative Project shall be responsible for the conveyance of required storm water flows into water quality basins in accordance with San Diego County BMP Manual. The County of San Diego Department of Public Works and the County Flood Control District shall review plans to ensure compliance with County Engineering and Flood Control Standards. Satisfaction of drainage conditions of approval associated with subdivision of the site will ensure protection of water quality within Upper Otay Reservoir, and thus constitutes compliance with the adopted threshold. The City of San Diego will also review the reports to ensure the quality of water at the Upper Otay Reservoir are not degraded by the Land Exchange Alternative.

2. The applicants shall demonstrate compliance with the County of San Diego Storm Water and Discharge Ordinance and the National Pollutant Discharge

Elimination System (NPDES) Municipal Permit. The applicants shall also obtain approval of the County Engineer of a report that includes the following elements:

a. Description of Alternative Project characteristics, site conditions, flow patterns, pollutants emanating from the Alternative Project site, and conditions of concern.
b. Description of site design and source control BMPs considered to be implemented.
c. Description of applicable structural BMPs.
d. Justification for selection of the proposed BMPs including: (a) targeted pollutants, justification and alternatives analysis, (b) design criteria (including calculations), (c) pollutants removal information, and (d) literature references.
e. Site plan depicting locations of the proposed BMPs.
f. Operation and maintenance plan for the proposed BMPs.

3. The Alternative Project shall be designed to avoid violation of any water quality standards or waste discharge requirements.
4. Development of the Alternative Project site shall not degrade potential beneficial uses of downstream water bodies as designated by the Regional Water Quality Control Board, including water bodies listed on the Clean Water Act Section 303d List.
5. Development of the Alternative Project site shall not substantially deplete groundwater supplies or interfere with groundwater recharge such that there would be net deficit in aquifer volume or a lowering of the local groundwater table.

6.7 Inventory of Future Required Urban Runoff Facilities

The following list of major urban runoff protection facilities will be required as a condition of the Land Exchange EIR Alternative.

Table 21: Inventory of Urban Runoff Protection Facilities

Urban Runoff Facility	Onsite/Offsite	No.	Phase	Responsibility
Water Quality Basins	Onsite	2	Various	Developer
Roadside Water Quality Basins	Offsite	7	Various	Developer
Roadside Biofiltration Facilities	Offsite	4	North	Developer

6.8 Threshold Compliance

Subject to phased developer installation of the above-referenced urban runoff facilities and fulfillment of the referenced conditions, including the condition to secure and construct the facilities prior to issuance of grading permits, the Alternative Project will be in compliance with the adopted threshold.

6.9 Urban Runoff Facilities Phasing

The following Table describes the phasing for runoff facility improvements in the Alternative Project.

Table 22: Runoff Facilities Improvements Phasing

Phase	Runoff Facilities
South	• Secure and enter an agreement to construct Urban Runoff Facilities prior to issuance of first grading permit in each phase. "(Phase Requirement #1)" • Secure and enter into an agreement to construct Basin #2 "(OS-1)" prior to issuance of grading permit. "(Phase Requirement #2)" • Secure and enter into an agreement to construct Proctor Valley Road basins prior to issuance of Proctor Valley Road grading permit in each phase. "(Phase Requirement #4)"
Central	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2 • Secure and enter into an agreement to construct Basins #1 "(OS-70)" prior to issuance of grading permit. "(Phase Requirement #3)" • Satisfy Phase Requirement #4
North	• Satisfy Phase Requirement #1 • Satisfy Phase Requirement #2 • Satisfy Phase Requirement #3 • Satisfy Phase Requirement #4

6.10 Financing Urban Runoff Facilities

County policy requires that onsite drainage facilities necessary to support the Alternative Project be funded and constructed as a portion of the development construction operation. As such, the Alternative Project will be required to enter into an agreement to secure and construct those facilities identified in this section prior to the issuance of grading permits in accordance with County Ordinance.

The financing and construction of urban or untreated runoff storm drain facilities as well as natural or treated runoff storm drain facilities required by the Alternative Project will be provided by either developer funding or bond debt financing. Off-site improvements which are part of the construction of Proctor Valley Road will be funded by the developers.

7.0 Water Facilities

7.1 Otay Ranch GDP/SRP Threshold

Ensure an adequate supply of water on a long-term basis, prior to development of each Otay Ranch SPA.

7.2 Service Analysis

Water service is anticipated to be provided to the Alternative Project site by the Otay Water District (OWD). OWD is a member of the San Diego County Water Authority (SDCWA) and Metropolitan Water District (MWD). It is the policy of these districts to ensure new growth will not reduce the availability of adequate water supplies or jeopardize water quality standards. Each district is responsible for providing the capital facilities necessary to accommodate existing development and future growth.

The Alternative Project site is located within the boundaries of the OWD. Retail water service for the Alternative Project is to be provided by the OWD. The Alternative Project will require annexation into an OWD Improvement District in order to obtain water service. This annexation is an internal action by the OWD and requires a written request and payment of processing fees.

OWD has prepared and utilizes the 2015 *Urban Water Management Plan*. The UWMP includes the Alternative Project's water demands. Anticipated water service for the Alternative Project site is analyzed in the *Overview of Water Service for Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative*, dated February 2018, prepared by Dexter Wilson Engineering, Inc.

Pursuant to OWD policy, the applicants will be required to prepare a subarea master plan (SAMP) for review and approval by OWD. The SAMP will provide more detailed information on the Alternative Project such as detailed design, phasing, pump station and reservoir capacity requirements, and extensive computer modeling to justify recommended water pipe sizes.

7.3 Alternative Project Processing Requirements

1. Identify phased demands in conformance with street improvements and in coordination with the construction of sewer facilities.

2. Identify locations of facilities for on-site and off-site improvements in conformance with the master plan of the water district serving the Land Exchange EIR Alternative.
3. Provide cost estimates.
4. Identify financing methods.
5. Prepare a Water Conservation Plan.
6. Annex the property to OWD improvement district.
7. Assure adequate water supply in accordance with the phasing plan.
8. Prepare a Subarea Master Plan in conformance with the requirements of OWD.

7.4 Existing Conditions

The majority of the water used in the San Diego County Water Authority (SDCWA) area is imported from the MWD. MWD receives its water supply through the State Water Alternative Project and the Colorado River Aqueduct. The SDCWA conveys water from the MWD to local purveyors within the County. The use of reclaimed water is prohibited by the City of San Diego on the Project site due to site runoff into the Otay Lakes Reservoir.

Potable water is provided to OWD's Central Service Area by SDCWA via the Second San Diego Aqueduct. Water is delivered at Aqueduct Connections No. 10 and No. 12 and is conveyed by gravity to OWD's terminal reservoirs at a grade of approximately 624 feet. One hundred percent of OWD's potable water demand is satisfied by purchases from the CWA.

OWD possesses several connections to SDCWA Pipeline No. 4 which delivers filtered water from MWD's filtration plant at Lake Skinner in Riverside County. OWD also possesses a connection to the La Mesa – Sweetwater Extension Pipeline, which delivers filtered water from the R.M. Levy Water Treatment Plant in the Helix Water District. This connection currently supplies water to the northern portion of the OWD only. Additionally, OWD has a connection to the City of San Diego's water system in Telegraph Canyon Road and has an agreement that allows it to receive water from the Lower Otay Filtration Plant.

No water service is currently provided to the Alternative Project site. The Land Exchange EIR Alternative will ultimately be served by the 980 Zone within the Central Service Area and the 1296 Zone within the Regulatory System of the OWD. The 980 Zone is supplied water from Connection No. 10 and 12, to the SDCWA aqueduct which fills 624 Zone reservoirs. Water will then be distributed within the 624 Zone and pumped to the 711

and 980 Zone storage and distribution systems. The 1296 Zone located in Jamul is served by one pump station located north of Lyons Valley Road near the 944 Zone Reservoirs.

Two pump stations presently exist within the 980 Zone. One station is referred to as the 980-1 Eastlake Pump Station, which is located on the south side of Otay Lakes Road at Lane Avenue. This station pumps water from the 711 Zone system into the 980 Zone distribution system and into two existing 980 Zone reservoirs located in the OWD Use Area property. The 980 Zone Pump Station currently has three pumps (one standby), each rated for 4,000 gpm, which results in a firm station capacity of 8,000 gpm. The 980-2 Pump Station, located north of Olympic Parkway on the east side of Eastlake Parkway, pumps water from the 624 Zone to the 980 Zone and currently has three duty pumps, one standby pump, and two spare pump cans for future expansion. All pumps are rated for 5,000 gpm which results in a firm pumping capacity of 12,000 gpm.

In addition, there are currently two reservoirs within the 980 Zone. These reservoirs are located at the same site within the OWD Use Area property north of Rolling Hills Ranch. These reservoirs each have a capacity of 5.0 million gallons, which equals a total of 10.0 million gallons' total storage capacity.

The major 980 Zone pipelines in the vicinity of the Alternative Project are all located southwest of the Alternative Project site and include a transmission line in Proctor Valley Road. The 36-inch transmission line in Proctor Valley Road presently extends to the eastern boundary of the Rolling Hills Ranch Alternative Project.

The 1296 Zone pump station has a firm capacity of 2,900 gpm and pumps water to three 1296 Zone Reservoirs located at the same site. These reservoirs have a total capacity of approximately 5.0 million gallons. Transmission and distribution lines in the area range from 8-inch to 16-inch and include a 10-inch line that is extended in Proctor Valley Road, just north of the Alternative Project site.

7.5 Alternative Project Demand and Proposed Facilities

7.5.1 Potable Water Design Program

In order to receive potable water service, the Alternative Project will require expansion of the existing 980 Zone and 1296 Zone water systems. In general, the potable water distribution system is designed to maintain static pressures between 65 psi and 200 psi. This criterion is used to initially divide an Alternative Project between water service

zones. Potable water distribution systems are also typically designed to yield a minimum of 40 psi residual pressure at any location under peak hour demand flows, and a minimum residual pressure of 20 psi during maximum day demand plus fire flow conditions. Potable water mains are sized to maintain a maximum velocity of 10 feet per second under a maximum day plus fire flow scenario and a maximum velocity of 6 feet per second under peak hour flow conditions.

7.5.2 Duty Factors and Peaking Factors

Table 23 represents the duty factors used in projecting the total average day water demand for the Alternative Project. The required fire flows and durations are also listed. To convert average day potable water demands to maximum day demands, the conversion policy of the OWD Water Resources Master Plan has been utilized. The same Master Plan has been utilized to convert average day potable water demands to peak hour demands.

Table 23: Water Duty Factors

Land Use Designation	Unit Domestic Demand	Required Fire Flow (gpm)	Required Fire Flow Duration (hours)
Rural Residential (<1 DU/Ac.)	1,000 gpd/unit	2,500	2
Single Family (Low Density 1-3 DU/Ac.)	700 gpd/unit	2,500	2
Single Family (Medium Density 3-10 DU/AC)	435 gpd/unit	2,500	2
Multi-Family (>10 DU/Ac.)	200 gpd/unit	2,500	2
Commercial	1,785 gpd/ac.	3,500	3
Public Safety	1,785 gpd/ac.	3,500	4
School	1,785 gpd/ac.	5,000	4
Park	1,900 gpd/ac.	---	---

7.5.3 Alternative Projected Water Demands

Utilizing the water duty factors identified above, the Alternative Projected potable water demands for the Alternative Project are as shown on the following table.

Table 24: Land Exchange EIR Alternative Projected Potable Water Demands

Land Use Designation	Quantity	Unit Demand	Total Average Demand (gpd)
Single Family (1-3 DU/AC)	611 units	700 gpd/unit	427,700
Single Family (3-10 DU/AC)	796 units	435 gpd/unit	346,260
MF/Mixed Use Residential	123 units	200 gpd/unit	24,600
MU Commercial	3.6 acres	1,785 gpd/acre	6,425
Parks	20.4 acres	1,900 gpd/acre[1]	38,760
Public Safety	2.3 acres	1,785 gpd/acre	4,105
School	8.3 acres	1,785 gpd/acre	14,815
Slopes	14.5[1] acres	1,900 gpd/acre[1]	27,550
TOTAL			**890,215**

[1] Estimate for permanently irrigated open space

7.5.4 Provision of Water Service

The Alternative Project is expected to receive water service by expanding the existing 980 Zone and 1296 Zone water system. This expansion program will involve installation of several major water system improvements that are presently identified in the OWD Capital Improvement Program.

The lower portion of the Alternative Project can be served from the 980 Zone by connecting to the existing 36-inch line in Proctor Valley road and extending a line into the Alternative Project. This line is anticipated to be a 20-inch line and will provide a supply to the proposed 1296 Zone Pump Station and proposed 980 Zone Reservoir. The anticipated range of pad elevations for areas that will receive service form the 980 Zone will be 609 feet to 830 feet with maximum static pressures ranging from 65 psi to 160 psi.

The upper elevations of the Alternative Project will be served from the 1296 Zone. The 1296 Zone portion of the Alternative Project is all residential and supporting facilities can be served by 8-inch and 12-inch distribution lines. OWD anticipates requiring a 20-inch 1296 transmission line from the 1296 Zone Pump Station to the existing system to the north of the Alternative Project. A connection to the existing offsite 10-inch line at Proctor Valley Road to the north of the Alternative Project is proposed.

7.5.5 Water Conservation Plan

The Otay Ranch GDP/SRP requires the preparation of a Water Conservation Plan for Land Exchange EIR Alternatives, which has been prepared by Dexter Wilson Engineering. The Water Conservation Plan provides an analysis of water usage requirements of the Alternative Project, as well as a detailed plan of proposed measures for water conservation and other means of reducing per capita water consumption from the Alternative Project. This Water Conservation Plan identifies the measures needed to reduce water use in Village 14 by 25%.

In addition, the Land Exchange EIR Alternative Specific Plan includes water conservation strategies for internal potable water usage. These strategies include:

1. Hot Water Pipe Insulation. This measure involves the insulation of hot water pipes with 1-inch walled pipe insulation and separation of hot and cold water piping. This measure is estimated to result in annual savings of 2,400 gallons per residential unit.

2. Pressure Reducing Valves. Setting the maximum service pressure to 60 psi reduces any leakage present and prevents excessive flow of water from all appliances and fixtures. This measure is estimated to result in annual water savings of 1,800 gallons per residential unit.

3. Water Efficient Dishwashers. There are a number of water efficient dishwashers available that carry the Energy Star label. These units result in an estimated yearly water savings of 650 gallons per residential unit.

4. Residential Landscaping. By complying with the model water use ordinance, it is estimated that outdoor water use at single family residences will be reduced by approximately 10 percent. With an estimated total water use of 500 gpd per home and approximately 50 percent of this water used outdoors, the estimated annual water savings is 9,125 gallons per home.

The above listed indoor water conservation measures would result in a daily reduction of approximately 57,394 gpd for the residential portion of the Alternative Project. This would bring the overall water usage for the Alternative Project down to 832,821 gpd. More information regarding water saving measures can be found in the *Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative*, prepared by Dexter Wilson Engineering, Inc., dated February, 2018.

7.5.6 Water Storage Capacity

OWD's policy is to provide one maximum day of emergency storage and 0.3 maximum days of operational storage. Fire flow storage is also required but has already been included in existing reservoirs within the 980 and 1296 Zones. Based on projected demands, the required storage in the 980 Zone is 2.0 million gallons. OWD has determined that adequate capacity exists in the 1296 Zone and the Alternative Project will not be required to construct additional storage in this zone. Additionally, the Proposed Project will comply with the storage requirement by paying water meter capacity fees, which will ensure provision of the necessary storage capacity.

7.6 Adequacy Analysis

OWD has not considered a similar WSAV for the Land Exchange Alternative. Nonetheless, while the Land Exchange Alternative would result in additional demand for water supply compared to the Proposed Project, OWD has already analyzed the potential impacts of this additional demand in its Program EIR dated August 2016 accompanying its 2015 Water Facilities Master Plan Update. The Program EIR assumed cumulative development of Otay Ranch Village 14 and Planning Area 16/19 at unit counts consistent with the existing GDP/SRP, which would accommodate the 1,530 units included in the Land Exchange Alternative. In fact, the Land Exchange Alternative would include a General Plan Amendment and Otay Ranch GDP/SRP Amendment to reduce the number of units in Village 14 and Planning Areas 16/19 from 2,123 units to approximately 1,626 units. In short, the Land Exchange Alternative would be consistent with, and could actually result in less water usage, than the projects assumed for the Project Area in the Program EIR for OWD's Water Facilities Maser Plan Update.

7.7 Inventory of Future Required Water Facilities

The following list of major water distribution facilities will be required as a condition of proposed development of the Alternative Project.

Table 25: Inventory of Major Water Distribution Facilities

Water Distribution Facility	No.	Size	Phase/ Trigger	Responsibility
1296 Transmission Line	1	20″	TBD	Developer
1296 Zone Pump Station	1	900 gpm	TBD	Developer
980 Reservoir and Transmission Line	1	2.0 MG	TBD	Developer
Off-site 980 Transmission Line to Chula Vista	1	20″ Line	1st Lot in 980 Zone	Developer
Water Lines in internal streets		Varies	All	Developer

7.8 Threshold Compliance

The *Otay Water District Water Resource Master Plan* and the *Overview of Water Service for Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative* prepared by Dexter Wilson Engineering, Inc., dated February 2018, identify water facilities necessary to provide the appropriate level of water service to meet the criteria established within the adopted plans. As such, the facilities identified in the plans are required to be constructed in conjunction with development of the Alternative Project. Additionally, the developers shall request and deliver to the County a service availability letter from the OWD prior to approval of each final map.

Water improvements shall be constructed in accordance with the report entitled *Overview of Water Service for Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative* and as subsequently amended or otherwise modified by OWD.

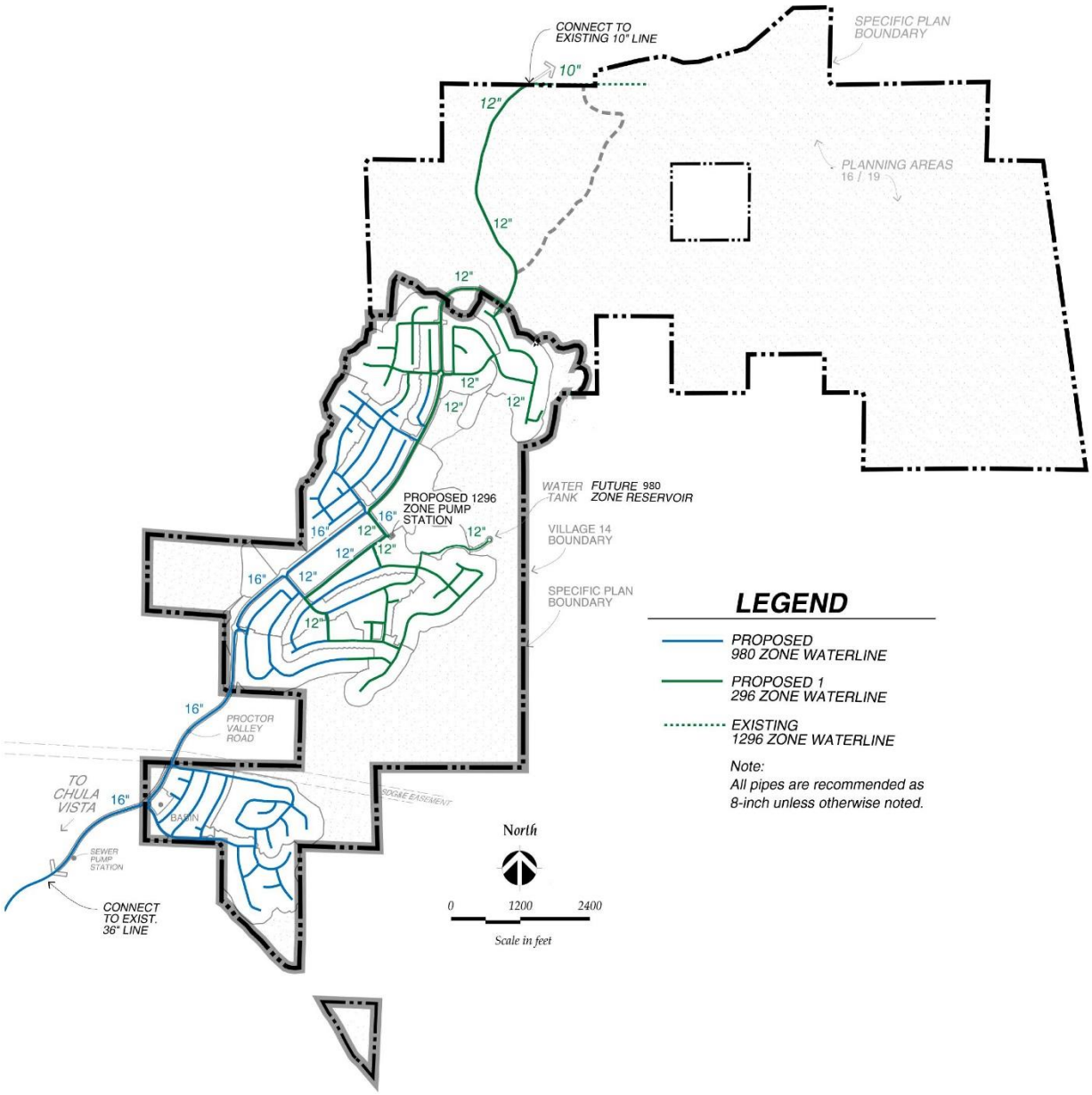


Exhibit G – Proposed Water Facilities

7.9 Phasing Water Facilities

The Alternative Project includes improvements to water facilities necessary for implementation of the Alternative Project. Certain facilities are required to be constructed concurrent or prior to construction of the Alternative Project before service to the Alternative Project site may begin. Table 26 describes the phasing for water facilities improvements in Village 14.

Table 26: Water Facilities Improvements Phasing

Phase	Water Facilities
South	• Secure and enter into an agreement to construct Off-site Transmission Line - South from Chula Vista prior to approval of the First Final Map serviced by the 980 zone. "(Phase Requirement #1)" • Determine if Water Tank (980) is needed prior to the First Final Map Alternative Project wide. "(Phase Requirement #2)" • Construct Water Tank (980) by the TBD building permit in the 1296 zone. "(Phase Requirement #3)" • Determine if Transmission line to 1296 Zone is needed prior to the First Final Map Alternative Project wide. "(Phase Requirement #4)" • Construct Transmission line to 1296 Zone by the TBD building permit in the 1296 zone. "(Phase Requirement #5)"
Central	• Secure and enter into an agreement to construct Off-site Transmission Line North of Jamul (1296) prior to approval of the First Final Map serviced by the 1296 zone and construct prior to the TBD lot in the 980 zone. "(Phase Requirement #6)" • Construct Interim 1296/980 Pressure Reducing Station prior to the TBD building permit in the 980 zone. "(Phase Requirement #7)" • Secure and enter into an agreement to construct Permanent 1296 Pump Station prior to approval of the Final Map containing the TBD lot service by the 1296 zone. "(Phase Requirement #8)" • Construct Permanent 1296 Pump Station prior to issuance of the TBD building permit in the 1296 zone. "(Phase Requirement #9)" • Satisfy Phase Requirements #1, #2, #3, #4, and #5.
North	• Satisfy Phase Requirements #2, #3, #4, #5, #6, #7, #8, and #9.

7.10 Financing Water Facilities

The financing and construction of potable water facilities will be provided by either developer funding, capacity fees or bond debt financing.

7.10.1 Developer Funding

On-site water distribution improvements within individual planning areas will be funded and provided by the developer in conjunction with the development improvement construction operation. The Developer will enter into an agreement to secure and construct the water facilities consistent with the Village 14 Phasing Plan.

7.10.2 Capacity Fees

OWD's Capital Improvement Program (CIP) wherein OWD facilitates design and construction of facilities and collects an appropriate share of the cost from developers through collection of capacity fees from water meter purchases. Capital Improvement Program Alternative Projects typically include supply sources, pumping facilities, storage, transmission mains and rerouting of existing mains.

CIP Alternative Projects are paid for by capacity fees collected on the sale of water meters after building permit issuance.

7.10.3 Bond Debt Financing

OWD may use bond debt financing from Improvement District 27 to assist in the financing of the District's CIP program. The Alternative Project site will be annexed into the boundaries of Improvement District (ID) 22 and 27, including payment of applicable fees.

8.0 Civic Facilities

8.1 Otay Ranch GDP/SRP Threshold

Make provisions for general governmental facilities, including regional and municipal administrative facilities and operation center(s).

8.2 Service Analysis

The Otay Ranch GDP/SRP identifies Village 14 as a "specialty village" (See the Otay Ranch GDP/SRP, Part II, Chapter 1. Section C) which "serves as a transition from the more urban uses of the west to the more rural areas of Jamul. ... The village has a low intensity character, with an emphasis on low density single family residential, local-serving commercial…Because it is relatively isolated, the village functions as a self-contained service area."

Consistent with the Otay Ranch GDP/SRP, the Land Exchange EIR Alternative includes a village-serving Mixed-Use Site, elementary school site and a public safety site planned to accommodate a fire station and Sherriff's storefront facility. The Otay Ranch GDP/SRP provided that regional and local civic facilities would be provided within the Eastern Urban Center within the City of Chula Vista. For areas within the County of San Diego, the Otay Ranch GDP/SRP provided that the County, in conjunction with special districts, is the current provider of municipal services to unincorporated areas, including the Land Exchange EIR Alternative.

8.3 Alternative Project Processing Requirements

Demonstrate conformance with the County General Plan Public Facility Element.

8.4 Existing Conditions

No civic administrative facilities are presently located in the County portions of Otay Ranch. The areas surrounding Otay Ranch are currently served by the County, the City of Chula Vista, and the City of San Diego.

The Land Exchange EIR Alternative is located within the jurisdiction of the County. The County's central civic administrative offices are located in the County Administrative Center located at 1600 Pacific Highway, in downtown San Diego. The main County

Operational Center, including the Planning and Development Services Department, is located on Ruffin Road in Kearney Mesa, in the City of San Diego. The County Courthouse and Hall of Justice are located on W. Broadway in the City of San Diego. The division headquarters for the County's field operations is located in the Spring Valley area. That facility is supplemented by two small adjacent operation centers, and three additional stations located in Alpine, Campo and Descanso.

Major county facilities in the vicinity of the Alternative Project site are shown in the following table.

Table 27: County Civic Facilities Inventory

Facility	Address
County Administration Center	1600 Pacific Highway, San Diego, CA 92101
Health Services Complex	3851 Rosecrans St., San Diego, CA 92110
Hall of Justice	330 W. Broadway, San Diego, CA 92101
County Courthouse	220 W. Broadway, San Diego, CA 92101
County Operations Center	5555 Overland Ave., San Diego, CA 92123
East County Regional Center	250 Main St., El Cajon, CA 92020
South County Regional Center	500 Third Ave., Chula Vista, CA 91910

8.5 Alternative Project Demand and Proposed Facilities

Build-out of the Alternative Project (1,530 du at 3.6 persons/du) will result in a projected total of 5,508 residents. This increase in population on the site, in conjunction with the proportional regional growth of the area, could result in the need for additional or expanded civic administrative facilities. Pursuant to the *Otay Ranch Facility Implementation Plan*, a ratio objective of 420 sq. ft. of civic administrative facility per 1,000 projected residents should be utilized in assessing Alternative Project demand.

The calculation of projected population times the adopted civic administrative facilities ratio results in a projected demand from the Alternative Project totaling 2,305 square feet of gross floor area. This demand will be satisfied through the use of existing County civic facilities as identified in Exhibit H.

8.6 Adequacy Analysis

No specific civic facilities will be required of the Land Exchange EIR Alternative. Civic facility improvements are made through the County CIP, funded by the County General

Fund. Payment of general taxes which contribute to the County General Fund from which civic facilities improvements are funded to the County CIP satisfies the demand created by the Land Exchange EIR Alternative.

8.7 Threshold Compliance

Based upon the analysis contained in this PFFP, it is Alternative Projected that the civic facilities threshold will be maintained throughout the development of the Land Exchange EIR Alternative.

8.8 Financing Civic Facilities

Civic facilities serving the unincorporated area have been funded from the County General Fund and service revenues. The Fiscal Impact Analysis portion of this PFFP forecasts that development of the Alternative Project would generate surplus tax revenues to the County, that is, more tax revenues than are necessary to serve demand generated by the Alternative Project. The fiscal analysis concluded that the Alternative Project will result in a net fiscal annual surplus at build-out of an estimated $329,031. Should the County elect, these revenues could be budgeted to fund additional facilities to meet the incremental increase in demand generated by this Alternative Project. Additionally, the Otay Ranch GDP/SRP obligates the Land Exchange EIR Alternative to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Land Exchange EIR Alternative is projected to result in sufficient tax revenues to accommodate the demand for Civic Facilities.

9.0 Fire and Emergency Protection Facilities

9.1 Otay Ranch GDP/SRP Threshold

County of San Diego: Provide sufficient fire and emergency service facilities to respond to calls within single family communities with residential lots of less than two acres, or more intensive uses such as multi-family residential and all commercial development except neighborhood commercial, within five-minutes travel time.

9.2 Service Analysis

Fire protection and emergency services are among the most vital and basic community services provided. Generally, firefighters are the first responders to fires, medical emergencies, hazardous materials incidents, floods, earthquakes and other emergencies and disasters. In addition, firefighters perform fire prevention and public education activities.

9.2.1 Regional Context

The Land Exchange EIR Alternative is within the boundary of the San Diego County Fire Authority ("SDCFA") The SDCFA has indicated that it can and will provide both fire protection services and emergency medical services to the Land Exchange Alternative. Fire equipment and paramedic ambulance are currently stationed in Jamul, a 20-25 minute travel time to the Alternative Project Area. Additionally, Chula Vista Fire Station #8 is located approximately 2.6 miles southwest of the Land Exchange Alternative and could provide additional emergency services through a mutual agreement between the City of Chula Vista and the County. City of Chula Vista Station #8 is approximately having a 5-10 minute travel time to the Land Exchange Alternative. Neither the Jamul nor Chula Vista station can service the Land Exchange Alternative within the required response times. Therefore, a new onsite SDCFA fire station will be needed to provide fire and emergency response services to the Alternative Project.

9.2.2 Alternative Project Context

The SDCFA responds to all calls for service within the boundaries of its service area, regardless of the nature of the call. However, Advanced Life Support (ALS) transportation services in this region are provided via a contract between the County of

San Diego and Mercy Transportation. Under current circumstances, fire equipment and paramedic ambulance are currently stationed in Jamul at Fire Station 36, within a 5-11 minute travel time to the Land Exchange Alternative.

Although out of the direct protection area, the neighboring fire agency, City of Chula Vista Fire Department, includes resources that may be available to respond to emergency calls as second or third engine via the existing or an updated automatic or mutual aid agreement. Of the existing fire stations in the vicinity of the Alternative Project, Chula Vista's Fire Station #8 is the closest. Chula Vista Fire Station No. 8 is located at the intersection of Otay Lakes Road and Woods Drive, approximately 2.9 miles from the southern-most entrance to the Land Exchange Alternative. CVFD Station #8 houses a staffed engine company, however it cannot reach the majority of the Land Exchange Alternative within the required 5-minute travel time.

Dudek & Associates has prepared an *Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Fire Protection Plan* (FPP); February 2018. The FPP includes an analysis of existing conditions and potential fire risks, establishes a 100' Fuel Management Zone and makes recommendations for vegetation management and construction strategies to reduce the risk of wildland fires. The FPP also analyzes the demand for services generated by the Land Exchange Alternative and makes recommendations regarding fire resources and facilities required to meet the Alternative Project's projected demand for fire and emergency medical services.

The Specific Plan identifies a 2.3-acre Public Safety Site within the Village 14 core area along Proctor Valley Road. This site is planned to accommodate a SDCFA fire station and will be able to serve the entire project within the applicable General Plan travel time standards

9.3 Alternative Project Processing Requirements

Specific Plan

- Specify site facilities and identify equipment needs
- Identify alternative financing methods
- Timing of construction consistent with Otay Ranch GDP/SRP Alternative Project requirements
- Determine travel times standards have been met
- Develop Alternative Project-specific guidelines
- Review fuel modification plans by fire agency

- Assure appropriate water pressures and supply for fire suppression and protection

Tentative Map

- Conditioned to dedicate or reserve site, as appropriate
- Funding identified

9.4 Existing Conditions

An inventory of the SDCFA fire stations is shown on the following table.

Table 28: SDCFA Fire Station Inventory

SDCFA Existing Facilities	Location
Station 36 - Jamul	14024 Peaceful Valley Ranch Rd. Jamul, CA 91935
Station 43 - Jacumba	1255 Jacumba St. Jacumba, CA 91934
Station 33 – Lawson Valley	3890 Montiel Truck Trail Jamul, CA 91935
Station 42 – Lake Morena	29690 Oak Drive Campo, CA 91906
Station 34 – Lee Valley	15781 Lyons Valley Rd. Jamul, CA 91935
Station 37 - Deerhorn	2383 Honey Springs Rd. Jamul, CA 91935
Station 8 – City of Chula Vista	1180 Woods Dr, Chula Vista, CA 91914
Station 6 – City of Chula Vista	605 Mt Miguel Rd, Chula Vista, CA 91914

An inventory of the Chula Vista fire stations near the Proposed Project is provided in Table 29:

Table 29: Proposed Project Vicinity SDCFA Fire Station Inventory

SDCFA Existing Facilities	Location
Station 8	1180 Woods Drive Chula Vista, CA 91914
Station 6	605 Mount Miguel Road Chula Vista, CA 91914
Station 7	1640 Santa Venetia Chula Vista, CA 91913
Station 4	8850 Paseo Ranchero Chula Vista, CA 91911

9.5 Alternative Project Demand and Proposed Facilities

Development of the Land Exchange EIR Alternative is projected to result in a build-out residential and employee population of approximately 5,508, persons. Using the SDCFA's estimate of 82 annual calls per 1,000 residents (which is similar to CVFD call data of 80 annual calls per 1,000 residents), the Land Exchange EIR Alternative's estimated 5,508 residents and 94 on-site employees at the mixed-use sites and school, would generate approximately 549 calls per year (about 1.26 calls per day). Seventy percent of calls (384 calls/year, or 1.105 calls per day) are expected to be medical emergency calls.

As previously described, the Land Exchange EIR Alternative will be built in phases. Based on the response analysis conducted in the FPP, the initial phases of the Land Exchange EIR Alternative will receive emergency services from an on-site, temporary SDCFA fire station in either the Multiple-Use area or another location near Proctor Valley Road determined to be acceptable to the SDCFA. The temporary fire station must be in place prior to issuance of the first certificate of occupancy and will remain in place until a permanent fire station is funded and constructed on-site.

The permanent on-site fire station shall be constructed on the 2.3-acre Public Safety site identified in the Specific Plan and Tentative Map. The fire station shall be sized to serve Village 14. If the facility is expanded to serve other areas within the SDCFA, Village 14 shall contribute its fair share of the cost to construct and equip the facility. In addition, Village 14 will contribute its fair share of ongoing maintenance and operation costs associated with the fire station.

9.6 Adequacy Analysis

Response times from the existing SDCFA station in Jamul to Village 14 would result in a 5-11 minute travel time to the Land Exchange EIR Alternative prior to the expansion of Proctor Valley Road. This level of service is inconsistent with the Otay Ranch GDP/SRP and County of San Diego threshold. Response times for existing Chula Vista stations vary from 5 – 10 minutes for the entirety of the Alternative Project Area, which is also inconsistent with the Otay Ranch GDP/SRP and County of San Diego threshold. Accordingly, additional facilities, staffing and equipment are necessary to serve the Land Exchange EIR Alternative.

Table 30 below summarizes the results of the emergency response analysis included in the FPP.

Table 30: Emergency Travel Times from Proposed On-Site Public Safety Site

5 Minute Travel Time	Units Reached	Percentage of Residential Units Reached (%)
On-Site Public Safety Site	1,530	100%

To avoid potential degradation of existing services, meet the anticipated increased demand in accordance with County emergency travel times and respond to the on-site risks, the Alternative Project will be required to provide additional fire and emergency services The additional resources required to serve the Alternative Project are outlined below, including the public safety site (land), fair share funding for facilities, staff and equipment and the staffing resources necessary to meet the demand for fire and emergency medical services generated by the Land Exchange EIR Alternative.

9.7 Inventory of Future Required Facilities and Staffing

The discussion below outlines estimated facilities, equipment and staffing which would be necessary to serve the Land Exchange EIR Alternative at build-out.

- 2.3-acre Public Safety Site
- On-Site Neighborhood Fire Station
- 3 career firefighters (at least one firefighter being also a paramedic)
- 1 career paramedic
- Type I Structure Engine
- Type III Interface Engine/Brush Rig

Below is a summary of the capital costs needed to service the Land Exchange EIR Alternative (including land).

Table 31: Capital Costs*

Land with graded lot and utilities (@ $400,000/acre (estimate))	$840,000
Facilities	
Temporary Fire Station (Pre-fab home w/ stick built)	$285,000
Permanent Fire Station (6,400 SF @ $350/SF)	$2,240,000
Equipment	
Type I Structure Engine	$550,000
Type III Interface Engine/Brush Rig	$450,000-500,000
Total Capital Costs	**$4,415,000**

*Current costs as of February 2018

The SDCFA projected full staffing costs at project build out of approximately $1.4 million/year. These staff costs include 3 Full-time Career Firefighters/Paramedics and 1 Reserve Firefighter when the Land Exchange EIR Alternative is built-out and the fire station is fully staffed. In the interim condition, when the Alternative Project is served from a temporary on-site fire station. Staffing is anticipated to consist of 2 full-time, career fire fighters and 1 volunteer. Final staffing levels and annual costs will be determined and documented in the Fire Service Agreement between SDCFA and the Applicant(s). These figures are shown in Table 31.

Table 32: SDCFA Operational Costs

Temporary Fire Station (2 career, 1 reserve)	TBD
Estimated Permanent Fire Station (4 career, 1 reserve)	$1,512,257

9.8 Threshold Compliance

Currently, crews and apparatus from the Jamul SDCFA Station 36 would result in a 5-11 minute travel time to the Land Exchange EIR Alternative. This response timeframe exceeds the adopted threshold. However, upon implementation of an on-site fire station (both in the temporary and permanent scenarios), the project would have response times of less than five minutes, as shown in Exhibit H and Table 30.

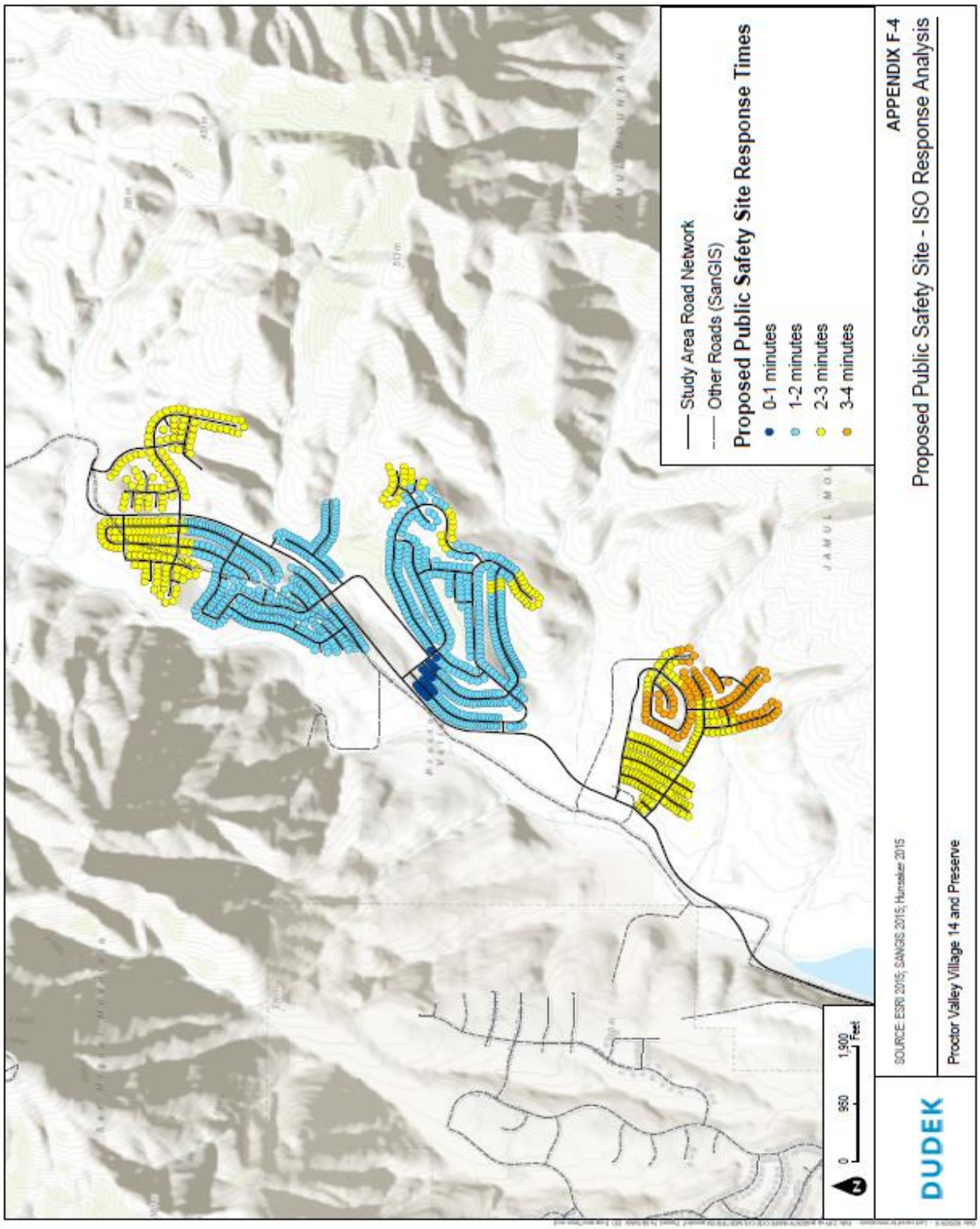


Exhibit H – Fire Response Modeling

9.9 Financing Fire Service Facilities

LAFCO recognized the difficulty of funding fire protection in its 2003 report, *Funding Fire Protection*. This report identifies a number of strategies, including, "Encourag[ing] fire protection providers to investigate increased cooperative arrangements…if doing so would produce efficiencies that could decrease dependence on property tax-supported operating budgets."

9.9.1 Capital Improvements

The County of San Diego and the SDCFA has enacted a Fire Mitigation Fee program which is applicable to the development Alternative Projects within the County. The Fire Mitigation Fee is presently calculated at $0.56/sqft. The dedication of land and construction of facilities for the public safety site may be credited against the total Fire Mitigation Fee. Table 33 estimates the Fire Mitigation Fees to be paid by the Land Exchange EIR Alternative.

Table 33: Estimated SDRFPD Fire Mitigation Fee Credit

Land Use	Avg. sq. ft.	Homes	Subtotal SF	Fire Mitigation Fee
Single Family Residential	2,918	1,407	4,102,250	$ 2,297,260
Multiple Use Residential	1,751	123	215,460	$ 120,658
Commercial	15,000		15,000	$8,400
Total		**1,530**	**4,332,710**	**$2,426,318**

It should be noted that while the anticipated Fire Mitigation Fee is approximately $2.43m, the actual costs to construct the fire facility is roughly $4.44m. The Land Exchange EIR Alternative will need to provide additional funding than provided by the Fire Mitigation Fee Program to develop the new proposed Fire station. The exact amount will be determined in a Fire Service Agreement between SDCFA and the Applicant when detailed fire station specifications are determined.

9.9.2 Operational Funding

In addition to the fee programs described above, the County will receive 1.8989% of the ad-valorem 1% of property taxes from the Alternative Project and the Fiscal Impact Analysis has assumed fire station operation and maintenance costs of $1.512 million per year, still generating a net benefit to the County in the amount of $229,356. The Fire

Service Agreement between the SDCFA and the Applicant(s) will include the final funding strategy for the new fire station.

10.0 Law Enforcement Facilities

10.1 Otay Ranch GDP/SRP Threshold

1. Respond to 84 percent of "Priority One" emergency calls within seven minutes and maintain an average response time to all "Priority One" emergency calls of 4.5 minutes or less.

2. Properly equipped and staffed police units shall respond to 62 percent of "Priority Two Urgent" calls within seven minutes and maintain an average response time to all "Priority Two" calls of seven minutes or less measured annually.

10.2 Service Analysis

The County of San Diego provides law enforcement services for all unincorporated areas of the County, including the Alternative Project site.

Law enforcement facilities and services are addressed as part of the Otay Ranch GDP/SRP in the *Facility Implementation Plan* (p.198) and in the Land Exchange EIR Alternative Specific Plan. The San Diego County General Plan Public Facilities Element also addresses law enforcement facilities.

10.3 Alternative Project Processing Requirements

Demonstrate conformance with the County General Plan Public Facility Element and the *Otay Ranch Facility Implementation Plan*.

10.4 Existing Conditions

The County Sheriff's Department currently provides law enforcement services to the County's unincorporated area and by contract to the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. Services

include general patrol, traffic enforcement, criminal investigation, crime prevention, juvenile services, communications dispatch and various management support services. As San Diego County's Chief Law Enforcement Officer, the Sheriff also provides regional law enforcement services for the entire County. These services include investigation, aerial support, emergency planning and response, law enforcement training and the operation of six County detention facilities.

Imperial Beach Sheriff's Station has been identified as a possible source for law enforcement services. This station also serves the City of Imperial Beach, the community of Bonita and portions of East Otay Mesa. Per the County General Plan Public Facility Element, the response time threshold for urban unincorporated areas is eight minutes for priority calls (life threatening situations or felonies in progress) and 15 minutes for non-priority calls. However, the Land Exchange EIR Alternative is held to the stricter thresholds stated above, as defined by the Otay Ranch GDP/SRP stated above.

The Imperial Beach Sheriff's Station presently has 44 sworn, 11 non-sworn, 7 clerical /front counter and 4 CSO's (66 total) employees. There are 18 patrol units each day, including general patrol, traffic enforcement and community service officers.

10.5 Alternative Project Demand and Proposed Facilities

The Land Exchange EIR Alternative will increase the demand for law enforcement services through the addition of residential and other uses in an area that is presently vacant and demands relatively few law enforcement services.

The San Diego Sheriff Department has been contacted to analyze the projected demand of the Alternative Project and submit a staffing projection. The PFFP will be updated with information from the staff report once it is prepared for the Alternative Project site. However, using the *Otay Ranch Facilities Implementation Plan* standard of 1.74 support staff to every 1.67 officers, the projected demand for law enforcement support staff is six staff members.

10.6 Adequacy Analysis

Payment of general taxes contributes to the County General Fund through which law enforcement facilities improvements are constructed pursuant to the County CIP. Therefore, tax revenues collected from the Land Exchange EIR Alternative will assure provision of future required facilities. The Specific Plan identifies a 2.3-acre public safety site within the Land Exchange EIR Alternative. The site could accommodate a Sheriff's

"storefront", along with a fire station. A storefront could also be accommodated in the commercial space within the Mixed Use area of the Land Exchange EIR Alternative. The Sheriff's department has indicated that the 500 sqft storefront would give deputies responding to calls or patrolling in the area aa adequate space to perform administrative tasks such as accessing a computer or writing a report. The County Sheriff's Department has requested a 500 square feet storefront would be sufficient to meet this demand.

10.7 Inventory of Future Required Facilities

A 2.3-acre public safety site is reserved within the Land Exchange EIR Alternative. A Sheriff's storefront may be located within the public safety site or within the commercial component of the Mixed-Use Site in the Land Exchange EIR Alternative. The Sherriff's department has requested a 500 square foot storefront.

10.8 Threshold Compliance

Based upon the analysis contained in this PFFP, it is Alternative Projected that the law enforcement threshold will be maintained throughout the development of the Land Exchange EIR Alternative.

10.9 Financing Law Enforcement Facilities

County law enforcement facilities serving the unincorporated area have been funded through the County General Fund. Based upon the analysis contained in this PFFP, it is Alternative Projected that the law enforcement facilities threshold will be maintained throughout the development of the Land Exchange EIR Alternative.

The Fiscal Impact Analysis forecasts that development of the Land Exchange EIR Alternative would generate a $1,128,294 annual surplus to the County, at build-out. This surplus exists after the Fiscal Impact Analysis model assumes a County cost of $6,318,471 per year for law enforcement protection to serve the Land Exchange EIR Alternative's expected demand as calculated by the Sheriff's Department.

11.0 Library Facilities

11.1 Otay Ranch GDP/SRP Threshold

Provide 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 population.

11.2 Service Analysis

The County, City of Chula Vista and the City of San Diego provide library and media services for the general Otay Ranch area.

The San Diego County Library Department provides services to the unincorporated areas (including the Alternative Project site) and eleven of the surrounding cities. The County Library Department presently operates 33 branch libraries throughout the county, plus a mobile library. One additional library is proposed at this time. The *Otay Ranch Facilities Implementation Plan* identifies the Eastern Urban Center (EUC) in the City of Chula Vista as the future location of a library serving the needs of the entire Otay Ranch planning area.

11.3 Alternative Project Processing Requirements

- Identify phased demand in relation to supply.

11.4 Existing Conditions

The County has five library facilities serving the South County area. The facilities are located in Bonita, Imperial Beach, Lincoln Acres, Spring Valley and Rancho San Diego. Bookmobile service provides circulation and distribution in rural areas. The locations of the 33 County branch libraries are identified in Table 34. At the end of 2014, the San Diego County Library also unveiled the 24/7 Library to Go located within the City of San Diego. This new facility is accessible 24/7 to residents to access books and a variety of digital media.

Table 34: Existing San Diego County Library Facilities

Library Branch	Address
Mobile Library	North County: 760-643-5125 East County: 619-660-6329
24/7 Library To Go	550 Overland Avenue San Diego, CA 92123
4S Ranch	10433 Reserve Dr. San Diego, CA 92127
Alpine	2130 Arnold Way Alpine, CA 91901
Bonita	4375 Bonita Rd. Bonita, CA 91902
Borrego Springs	571-A Palm Canyon Drive Borrego Springs 92004
Campo	31356 Highway 94 Campo, CA 91906
Cardiff-by-the-Sea	2081 Newcastle Ave. Cardiff-by-the-Sea, CA 92007
Casa de Oro	9805 Campo Road #145 Spring Valley, CA 91977
Crest	105 Juanita Lane El Cajon, CA 92021
Del Mar	1309 Camino Del Mar Del Mar, CA 92014
Descanso	9545 River Drive Descanso, CA 91916
El Cajon	201 E. Douglas El Cajon, CA 92020
Encinitas	540 Cornish Drive Encinitas, CA 92024
Fallbrook	124 S. Mission Road Fallbrook, CA 92028
Fletcher Hills	576 Garfield Ave. El Cajon, CA 92020
Imperial Beach	810 Imperial Beach Blvd. Imperial Beach, CA 91932

Jacumba	44605 Old Hwy. 80 Jacumba, CA 91934
Julian	1850 Highway 78 Julian, CA 92036
Lakeside	9839 Vine Street Lakeside, CA 92040
La Mesa	8074 Allison Ave. La Mesa, CA 91941
Lincoln Acres	2725 Granger Ave. National City, CA 91950
Lemon Grove	8073 Broadway Lemon Grove, CA 91945
Pine Valley	28804 Old Hwy. 80 Pine Valley, CA 91962
Potrero	24883 Potrero Valley Road Potrero, CA 91963
Poway	13137 Poway Rd. Poway, CA 92064
Ramona	1406 Montecito Rd. Ramona, CA 92065
Rancho San Diego	11555 Via Rancho San Diego El Cajon, CA 92019
Rancho Santa Fe	17040 Avenida de Acacias Rancho Santa Fe, CA 92067
San Marcos	#2 Civic Center Drive San Marcos, CA 92069
Santee	9225 Carlton Hills Blvd. #17 Santee, CA 92071
Solana Beach	157 Stevens Ave. Solana Beach, CA 92075
Spring Valley	836 Kempton Street Spring Valley, CA 91977
Valley Center	29200 Cole Grade Road Valley Center, CA 92082
Vista	700 Eucalyptus Ave. Vista, CA 92084

11.5 Alternative Project Demand

The Otay Ranch Facility Implementation Plan requires 350 square feet (gross) of adequately equipped and staffed regional/area library facilities per 1,000 populations. The projected population for the Alternative Project is 5,508 people; therefore, the Land Exchange EIR Alternative will have a total library demand of 1,928 square feet.

11.6 Adequacy Analysis

The demand for library facilities generated by the build-out of the Land Exchange EIR Alternative will ultimately be satisfied by the existing libraries within the vicinity of the Alternative Project Area and any new libraries constructed in the future. The Otay Ranch GDP/SRP plans for the location of a 36,758 sq. ft. main library in the Eastern Urban Center (EUC). As reported in the Chula Vista Growth Management Commission 2016 Annual Report, May 2016, a 30,000 – 35,000 SF library is expected to be construction by 2021 within the EUC (Millennia). In addition, the City of Chula Vista owns a site within the Rancho del Rey community planned for a full-service library facility, however the City has not secured construction funding.

11.7 Inventory of Future Required Facilities

No specific library facilities will be required of the Land Exchange EIR Alternative.

11.8 Threshold Compliance

The Land Exchange EIR Alternative generates a total library demand of 1,928 square feet. the Otay Ranch GDP/SRP plans for the location of a. main library in the Eastern Urban Center (EUC). The demand for library facilities generated by the build-out of the Land Exchange EIR Alternative will ultimately be satisfied by the EUC library, along with existing libraries within the vicinity of the Land Exchange EIR Alternative.

11.9 Financing Library Facilities

Funding for construction of new library facilities throughout the County comes from a variety of sources, general fund contributions from cities, private contributions and federal Library Services and Construction Act (LSCA) Title II grants. Since the County Library has its own property tax share (approximately three percent (3%) of the one percent property tax), funding library facilities has not been funded from the County

General Fund. Funding of City library facilities in the eastern part of the City comes from the Public Facilities Development Impact Fee Program. These facilities have been identified and fully funded to serve the Land Exchange EIR Alternative.

The Land Exchange EIR Alternative is not within the boundaries of any current public facilities DIF program. Based upon the analysis contained in this PFFP, it is projected that the library threshold will be maintained throughout the development of the Land Exchange EIR Alternative. Alternative Project mitigation is required through the payment of property taxes. The fiscal analysis concluded that the Land Exchange EIR Alternative will result in an estimated net fiscal annual surplus at build-out of $1,128,294. Additionally, the Otay Ranch GDP/SRP obligates the Land Exchange EIR Alternative to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Land Exchange EIR Alternative is projected to result in sufficient tax revenues to accommodate the demand for Library Facilities. As a result, no new library facilities will be required of the Land Exchange EIR Alternative.

12.0 Parks and Recreation Facilities

12.1 Otay Ranch GDP/SRP Threshold

The County Park Lands Dedication Ordinance (PLDO) and the Otay Ranch GDP/SRP standard requires that three (3) acres of local parkland be provided per 1,000 residents. In addition, the Otay Ranch GDP/SRP requires twelve (12) acres of other active and passive recreation and open space per 1,000 residents and fifteen (15) acres of regional park land per 1,000 residents.

12.2 Service Analysis

The Otay Ranch GDP/SRP identifies four levels of parks. Town square or pedestrian average one acre in size and may contain small play grounds or picnic areas. These facilities may be publicly of privately owned and are eligible for park credit. Neighborhood parks are typically sized between 5 and 20 acres and located to meet the needs of an individual village or planning area. Community parks should be at least 20 acres in size and programmed with intense recreational facilities designed to serve the needs of multiple villages or planning areas. Regional parks are typically larger than 200 acres and contain regional recreational facilities such as camping and hiking amenities.

The County Park Lands Dedication Ordinance requires 390.73 square feet of local parkland be provided per lot or unit, whichever is greater, in the Jamul Planning Area. Town square/pedestrian parks, neighborhood parks, and community parks with active recreational uses can satisfy this requirement. The PLDO requirement can be satisfied through the dedication of land, the payment of fees, the provision of private or public recreation facilities or a combination of these methods.

The County Parks and Recreation Department is responsible for the planning and acquisition of County parkland and responsible for addressing compliance with the adopted thresholds.

12.3 Alternative Project Processing Requirements[2]

- Provide a Parks Master Plan.
- Specific facility site identified and reserved including consideration of areas adjacent to public schools and other public lands where co-location is feasible and desirable.
- Equipment needs identified.
- Alternative financing methods refined.
- Alternative maintenance entities and funding identified.
- Timing of construction consistent with Otay Ranch Park and Recreation Implementation Plan identified.
- Sites for special purpose parks reviewed.
- Design criteria for land adjacent to regional parks prepared.

12.4 Existing Conditions

The Land Exchange EIR Alternative is located within the Jamul Local Park Planning Area. Currently, no County Master Local Park Plan has been created for this area. One County park currently exists within the boundaries of the Jamul Local Park Planning Area, Otay Lakes County Park. The Otay Lakes County Park is 78.0 acres and is located approximately seven miles south of the Land Exchange EIR Alternative. Additionally, the Otay Valley Regional Park (OVRP) is a future planned park within the Otay Local Park Planning Area.

In addition to the two parks located within the Otay Park Planning Area, numerous County and City of Chula Vista parks exist within the vicinity of the Land Exchange EIR Alternative. These parks are identified in Tables 35-38.

Table 35: Existing Parks within Otay Local Park Planning Area

Park	Jurisdiction	Acres
Otay Lakes County Park (Existing)	County	78.0
Total		**78.0**

[2] From the Otay Ranch GDP/SRP.

Table 36: Existing Regional Park Inventory

Park	Jurisdiction	Acres
Otay Valley Regional Park – Open Space Preserve[3]	OVRP JEPA	3,000+
Sweetwater Park	County	571
Total Existing Regional Acres		**3,571+**

Table 37: Existing Chula Vista Community Park Inventory

Park	Jurisdiction	Acres
Mountain Hawk Park	Chula Vista	12.0
Chula Vista Community Park	Chula Vista	14.9
Greg Rogers Park	Chula Vista	43.4
Rohr Park	Chula Vista	59.5
Discovery Park	Chula Vista	20.4
Montevalle	Chula Vista	29.0
Salt Creek	Chula Vista	19.8
Veterans Park	Chula Vista	10.5
Total Existing Community Acres:		**209.5**

Table 38: Future Otay Ranch Community Parks

Park	Jurisdiction	Acres
Otay Ranch Community Park (Village 8)	Chula Vista	51.5
Otay Ranch Community Park (Village 4)	Chula Vista	70.0
Otay Ranch Community Park (Village 13)	County	10.3
Total		**131.8**

12.5 Alternative Project Demand and Proposed Facilities

12.5.1 Local Park Compliance

The amount of park lands required in association with the Land Exchange EIR Alternative is based on the number of homes or lots (whichever is greater) in the village. For the Jamul Local Park Planning Area, the PLDO requires the dedication of 390.73 sq. ft. of improved park land for each new unit or lot, whichever is greater. The Alternative

[3] Only a portion of the OVRP is available for public use currently.

Project includes 1,530 units; therefore, the total requirement is 13.7 acres of improved park land (1,530 x 390.73 sf/unit) divided by 43,560 sf/acre = 13.7 acres.

To meet this requirement, the Specific Plan proposes four public parks, three private swim clubs, a senior activity center, a village square/community facility, and a series of private pocket parks totaling 20.4 gross and 16.5 net acres. The parks included in the Land Exchange EIR Alternative are identified in Table 38. Public parks will be maintained by the County of San Diego through an assessment mechanism such as a CFD. Maintenance of private parks will be the responsibility of a homeowner's association.

12.5.2 Open Space Compliance

The Otay Ranch GDP/SRP also requires 12 acres of "other passive or active recreation and open space areas," per 1,000 residents and 15 acres of "regional park and open space" land per 1,000 residents.

Based on an estimated Alternative Project population of 5,508 residents, the 12-acre standard requires 66.1 acres of open space and the 15-acre standard requires 82.6 acres of dedicated open space. This combined open space requirement of 148.7 acres is satisfied two ways. First, the Land Exchange EIR Alternative contains 176.2 acres of internal open space and approximately 1,757.6 acres of RMP Preserve land. Second, in satisfaction of the Otay Ranch RMP Phase 2 Preserve Conveyance Obligation, the Land Exchange EIR Alternative will convey approximately 654.5 acres of RMP Preserve land to the Preserve Owner/Manager (public ownership).

Table 39: Preserve Conveyance Obligation Estimate

Use	Acres
Total Development Acres	598.7
Common Use Areas	
PV Rd. Onsite	(23.1)
Public Parks	(13.5)
School Site	(8.3)
Public Safety Site	(2.3)
OWD Water Tank Access Road	(0.6)
Total Developable Acres (Per Otay Ranch RMP Phase 2)	**550.9**
Conveyance Factor	*1.188*
Acres to be Conveyed to Preserve (550.9 x 1.188)	**654.5**

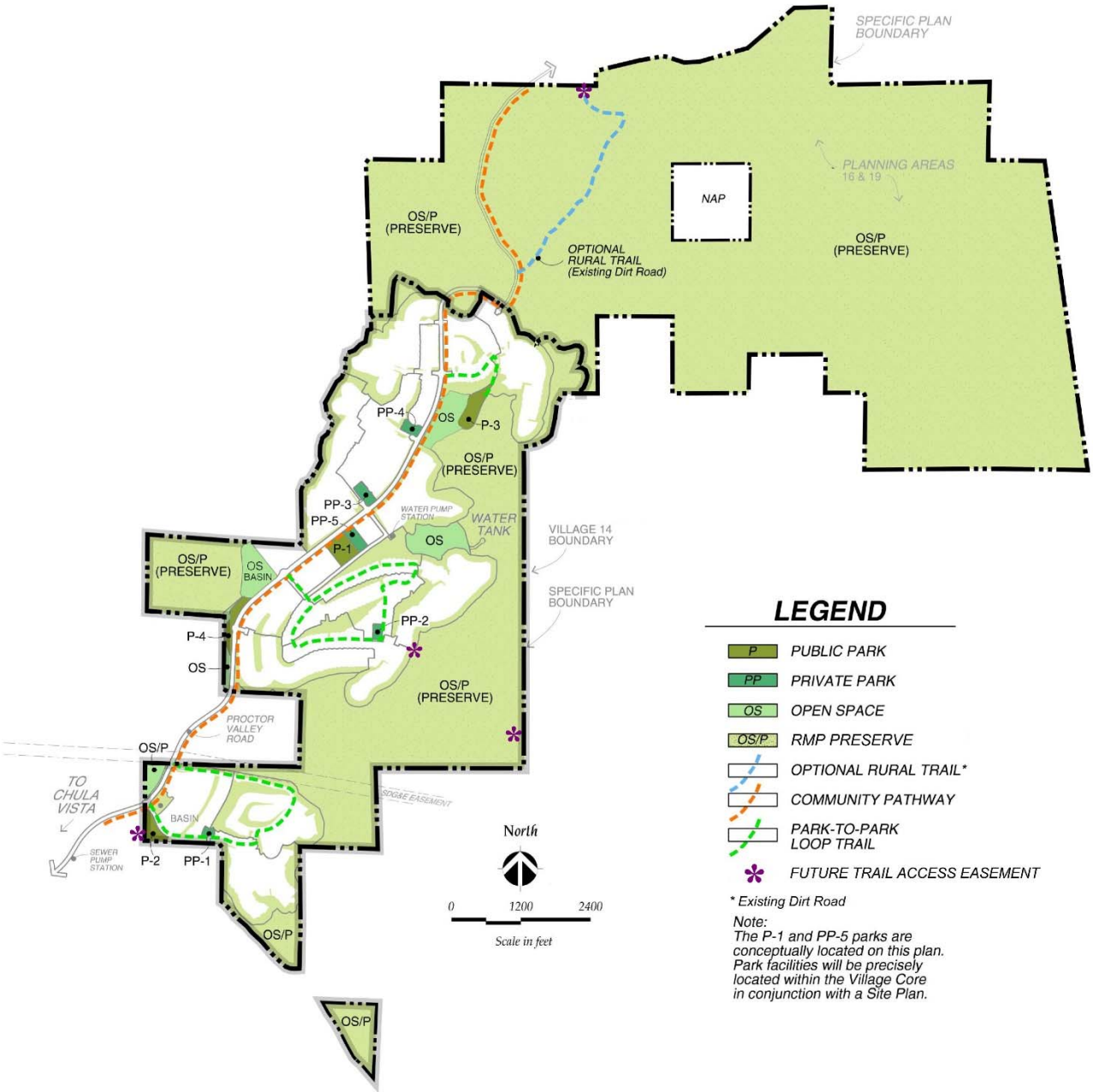


Exhibit I -Parks, Recreation, Open Space, RMP Preserve & Trails Plan

It should be noted there is no relationship between the MSCP Preserve acres within the Land Exchange EIR Alternative (roughly 1,757.6 acres), the RMP Preserve Conveyance Obligation (approximately 604.2 acres), and the MSCP Preserve land within the Applicant's ownership. The RMP Preserve Conveyance Obligation is calculated by multiplying the Land Exchange EIR Alternative's Development Area (minus acreage associated with circulation element roads, public schools, lands designated for public use areas and public parks – defined as "Common Use" land in the Otay Ranch Phase 2 RMP, Page 59) by 1.188. The precise Preserve Conveyance Obligation will be calculated based on final maps within the Land Exchange EIR Alternative. Required MSCP Preserve land must be conveyed to the City of Chula Vista and County of San Diego, acting jointly in their capacities as the Otay Ranch Preserve Owner/Manager (POM). in conjunction with the approval of final maps within the Land Exchange EIR Alternative. The MSCP Preserve land conveyed may or may not be within the Land Exchange EIR Alternative boundary but must be within the Otay Ranch Preserve.

The majority of the natural open space within Otay Ranch is governed by the *Otay Ranch Resource Management Plan* (RMP), which established the 11,375 acres Otay Ranch Preserve open space system. The POM will be responsible for the maintenance, monitoring and management of the land within the MSCP Preserve. POM operations are funded through a special tax imposed upon Otay Ranch development.

12.5.3 Trails

A 4.5-mile multi-use Community Pathway is planned along Proctor Valley Road within the Land Exchange EIR Alternative. The Community Pathway connects the Chula Vista Regional Trail network to the west, traverses the entire length of Proctor Valley and connects to the community of Jamul. The Land Exchange EIR Alternative also includes a 3.0-mile of specialty trails for a park-to-park loop network that connects the residential neighborhoods to public and private parks and the Community Pathway. An option potential off-site rural trail located within the disturbed footprint of an existing dirt road is also included in the Land Exchange EIR Alternative. The pathway and trail system is shown on Exhibit I and additional details can be found in the *Otay Ranch Village 14 and Planning Areas 16/19 – Land Exchange EIR Alternative Parks, Recreation, Open Space and Trails Master Plan*.

Pathways will be phased in conjunction with adjacent circulation improvements. Pathways will be constructed by the developer and maintained by a homeowner

association or other appropriate entity. Existing trails in the Otay Ranch Preserve will be maintained by the Preserve Owner/Manager.

12.6 Adequacy Analysis

Based upon the analysis contained in this section of the PFFP, the Land Exchange EIR Alternative is projected to satisfy the park demand generated by the ultimate residential development. The inventory of proposed park facilities is provided in Table 40. Therefore, the park and open space demands are satisfied through implementation of the Land Exchange EIR Alternative.

Additionally, the PLDO includes an in-lieu fee which calculates the cost of park land acquisition and improvements in each park planning area on a per home basis. In the Jamul Local Park Planning Area, the in-lieu fee is $4,159 per home. If the Land Exchange Alternative paid this fee for all 1,530 homes, the total amount collected would be $6,363,270. However, it is anticipated the Land Exchange EIR Alternative will meet PLDO requirements through dedication of 20.4 acres of developed/improved parkland. The estimated cost for improvements to the proposed parks is anticipated to be significantly greater than the in-lieu park fee and the proposed park facility's acreage meets the County PLDO requirement. The provision of park improvements by the Land Exchange EIR Alternative meets the requirements of the County PLDO.

Demand for 148.7 acres of open space is met through provision of 176.2 acres of internal open space plus designation of 1,748.8 acres of RMP Preserve within the Land Exchange EIR Alternative.

12.7 Inventory and Cost Estimate of Future Facilities

Conceptual park features for each park facility in Village 14 are provided. However, further refinement of the programming for each park could result in other amenities being planned for each park.

12.8 Threshold Compliance

The parks and recreation facilities identified above (P-1 through P-4 and PP-1 through PP-5) satisfy the PLDO requirement for local parks. The combination of 176.2 acres of Open Space, internal slopes, preserve edges and/or fuel modifications within the project

and 1,748.8 acres of RMP Preserve will provide adequate open space to satisfy the open space requirements for the Land Exchange EIR Alternative.

Table 40: Inventory of Park Facilities

Park	Conceptual Features[4]	Acres (Gross)	Acres (Net)	PLDO Credit[5]	Maint. Entity
Public Parks (100% Park Credit)					
P-1 Village Green	• Baseball field w/dugout and bleachers (Artificial Turf) • ½ Court Basketball Courts (3) • Shaded Play Structures for younger and older children (2) • Parkour stations (4) • Perimeter Trail • Restroom/Maintenance Building • Large Community Shade Structure w/32 farm tables • Walkway w/lighting • Shared Parking lot (13 stalls) w/adjacent Community Facility (PP-5)	3.90	3.71	3.71	CFD
P-2 South Park	• Basketball Court (1) • Pickleball Court • Shaded Play Structures (2) • Restroom/Maintenance Building • Parkour Stations (5) • Shade Structures w/Farm tables and BBQs (28) • Perimeter Trail • Perimeter Fencing • Easement for Potential Trail Access • Park Lot (12 Spaces)	2.90	2.26	2.26	CFD

[4] The Conceptual Features listed for each park and recreation facility (public and private) are based on Concept Plans for each facility and may be revised during final design. Parks are subject to review and approval by the County Department of Parks and Recreation.

[5] PLDO credit is estimated for planning purposes only. Additional analysis during preparation of park site plans will determine actual park credit for each park facility.

Park	Conceptual Features[4]	Acres (Gross)	Acres (Net)	PLDO Credit[5]	Maint. Entity
P-3 Overlook Park	• Boot Camp Work-out Turf Area • Yoga Pavilion • Bocce Ball Courts (3) • Parkour Stations (5) • Meditation Garden • Restroom Building with Storage • Parking Lot (13 spaces) • Shade Structures w/Farm Tables (8) • Concrete Pathway w/lighting • Perimeter Fencing	4.20[6]	2.61	2.61	CFD
P-4 Scenic Park	• Dog Parks w/fencing and shaded seating area • Pickleball Court (1) • Parkour Stations (4) • Restroom Building • Boot Camp Lawn Area • Open Lawn Areas • Picnic Pavilion w/4 Farm tables & BBQ • Walkway w/lighting • Parking Lot (16 spaces) • Perimeter Fencing	2.52	2.03	2.03	CFD
Subtotal Public Parks		**13.52**	**10.61**	**10.61**	
Private Recreation Facilities (50% Park Credit)					
PP-1 South Community Swim Club	• 25 Yard Lap Pool • Children's Pool • Sun Deck & Shade Structure • Outdoor Kitchen & Fireplace • Play Area w/ Play Structure • Cabanas (5) • Restroom/Pool Building	0.75	0.55	0.28	HOA
PP-2 Central Community Swim Club	• 25-Yard Lap Pool • Children's Pool • Restroom/Pool Equipment Building • Shade structures	1.00	0.86	0.43	HOA

[6] The P-3 gross acreage includes the 0.99-acre open space lot (OS-18) surrounding the park site.

Park	Conceptual Features[4]	Acres (Gross)	Acres (Net)	PLDO Credit[5]	Maint. Entity
	• Covered Dining and Kitchen Areas • Outdoor BBQ • Covered Play Area w/Play Structure • Perimeter Fencing				
PP-3 Senior Activity Center	• 25 Yard Lap & Water Aerobics Pool • Yoga Pavilion & Shade Structure • Active Lawn Area • Meeting Room • Outdoor Kitchen • Outdoor Living Area w/Fireplace • Bocce Ball Court w/shaded seating area • Cabanas • Water Feature • Perimeter Fencing	1.84	1.39	0.70	HOA
PP-4 North Community Swim Club	• Pool • Outdoor Dining Area w/ BBQs • Shade Structure • Fireplace w/Shade Structure • Restroom/Pool Building • Perimeter Fencing • Parking Lot (11 spaces)	1.38	0.58	0.29	HOA
PP-5 Village Square /Community Facility[7]	• Community Center Building (7,500 sf) • Arrival Plaza w/Fountain and Seating Area • Raised Band Stand with Natural Grass Seating Area • Covered Outdoor Dining, BBQ, Fireplace and Gathering Area • Two Bocce Ball Courts w/Shade Structure	1.90	1.64	0.82	HOA

[7] The precise location of the P-1 and PP-5 facilities will be determined during preparation of the Master Village Core Site Plan.

Park	Conceptual Features[4]	Acres (Gross)	Acres (Net)	PLDO Credit[5]	Maint. Entity
	• One Sand Volleyball Court w/Shade Structure • Shared Parking (13 stalls) w/Adjacent P-1 Park				
Subtotal Private Park		6.87	5.02	2.51	
Total Public & Private Park Credit		20.39	15.63	13.12	
Total Park Requirement				13.72	
(shortfall)/excess[8]				(0.60)	

12.9 Parks and Recreation Facilities Improvements Phasing

Table 41 describes the parks and recreation facilities improvements phasing for the Alternative Project.

Table 41: Local Park Improvements Phasing

Phase	Parks & Recreation Facilities
South	• Offer IOD for Neighborhood Park (P-2) at the Final Map containing the park site. • Grade concurrent Neighborhood Park with South grading. • Begin to construct Neighborhood Park (P-2) prior to the building permit threshold as set forth in the map conditions; complete in 12 months; open to public within six months after completion. • Secure and enter into an agreement to construct Private Swim Club (PP-1) prior to approval of the First Final Map of each Phase. • Secure and enter into an agreement to construct Private Pocket Parks prior to approval of the First Final Map of each Phase. "(Phasing Requirement #1)"
Central	• Offer IOD for Neighborhood Parks (P-1 and P-4) at the Final Map containing the respective park site. • Grade Neighborhood Parks concurrent with Central grading. • Begin to construct Neighborhood Park (P-1) prior to the building permit threshold as set forth in the map conditions; complete in 12 months; open to public within six months after completion.

[8] Excess/Deficit parkland to be addressed in Park Agreement.

	• Begin to construct Neighborhood Park (P-4) prior to the building permit threshold as set forth in the map conditions; complete in 12 months; open to public within six months after completion. • Secure and enter into an agreement to construct Private Swim Club (PP-2) prior to approval of the First Final Map of each Phase. • Secure and enter into an agreement to construct Private Community Center (PP-5) prior to approval of the First Final Map of each Phase. • Secure and enter into an agreement to construct Private Senior Activity Center (PP-3) prior to approval of the First Final Map of each Phase. • Satisfy Phase Requirement #1
North	• Offer IOD for Neighborhood Park (P-3) at the Final Map containing the park site. • Grade Neighborhood Park concurrent with North grading. • Begin to construct Neighborhood Park (P-3) prior to the building permit threshold as set forth in the map conditions; complete in 12 months; open to public within six months after completion. • Secure and enter into an agreement to construct Private Swim Club (PP-4) prior to approval of the First Final Map of each Phase. • Satisfy Phase Requirement #1

12.10 Financing Park Facilities

Local park sites and improvements will be satisfied through compliance with the County's Park Land Dedication Ordinance (PLDO) whereby the developers shall receive credit against PLDO Fees for the dedication and construction of eligible park improvements.

It is also anticipated that a CFD will be formed to offset any costs associate with the annual long term maintenance of project specific parks, trails, and open space facilities.

13.0 School Facilities

13.1 Otay Ranch GDP/SRP Threshold

Additional facilities to serve children generated by new development shall be provided concurrent with need, and shall be of the quality and quantity sufficient to meet, at a minimum, State Department of Education standards.

13.2 Service Analysis

The purpose of the Otay Ranch GDP/SRP Threshold Standard is to ensure that the districts have the necessary school sites and funds to meet the needs of students in newly developing areas in a timely manner, and to prevent the negative impacts of overcrowding on the existing schools. Through the provision of development forecasts, school district personnel can plan and implement school facility construction and program allocation in line with development.

On November 3, 1998, California voters approved Proposition 1A, the Class Size Reduction Kindergarten-University Public Education Facilities Bond Act of 1998. Prior to the passage of Proposition 1A, school districts relied on statutory school fees established by Assembly Bill 2926 ("School Fee Legislation") which was adopted in 1986, as well as judicial authority (i.e., Mira-Hart-Murrieta court decisions) to mitigate the impacts of new residential development. In a post Proposition 1A environment, the statutory fees provided for in the School Fee Legislation remains in effect and any mitigation requirements or conditions of approval not memorialized in a mitigation agreement, after January 1, 2000, will be replaced by Alternative Fees (sometimes referred to as Level II and Level III Fees). The statutory fee for residential development is referred to in these circumstances as the Level I Fee (i.e., (2016/2017) currently at $3.36 per square foot for new residential construction and $0.54 per square foot for new commercial and industrial construction).

CVESD utilizes their current *Fee Justification Report, May 2014, by SDFA*, to quantify the impacts of new residential development on the district's school facilities, and to calculate the permissible Alternative Fees to be collected from such new residential development. To ensure the timely construction of school facilities to house students from residential development, alternative fees or implementation of a Mello Roos Community Facilities District (CFD) will be necessary.

Both CVESD and SUHSD are justified per Gov't Code to collect the maximum fee of $3.48 per square foot for new residential construction. CVESD has an agreement with SUHSD specifying the amount of the development fee that each district collects from new residential development. Based on the agreement, CVESD collects $1.53 per square foot and SUHSD collects $1.95 per square foot for residential construction.

Sweetwater Union High School District utilizes their current "Sweetwater Union High School District Long Range Comprehensive Master Plan." Implementation of the SUHSD Plan is ongoing and has resulted in the upgrading of older schools and accommodating continuing growth. In November 2000, Proposition BB was approved by the voters. The district leveraged $187 million from Proposition BB into a $327 million effort utilizing state funding to modernize and upgrade twenty-two campuses. Additional work efforts associated with Proposition O have commenced and construction has begun.

In November 2006, the community supported Proposition O, a $644 million bond measure. This bond measure addresses the critical and urgent safety needs of the 32 campuses within the SUHSD. The types of repairs and improvements that Prop O addresses includes: improving handicap accessibility, removing asbestos and lead paint, and upgrading fire and life safety systems.

13.3 Alternative Project Processing Requirements

Specific Plan/Public Facilities Finance Plans

1. Identify student generation by phase of development.
2. Site proposed school facilities in conformance with the Chula Vista Elementary School District's Standards and Criteria and the Sweetwater Union High School District Long Range Comprehensive Plan.
3. Reserve school sites, if necessary, or coordinate with the district(s) for additional school classrooms.
5. Identify facilities consistent with proposed phasing.
6. Demonstrate the ability to provide adequate facilities to access public schools in conjunction with the construction of water and sewer facilities.
7. Enter into a School Mitigation Agreement.

13.4 Existing Conditions

13.4.1 Existing School District Boundaries

The Land Exchange EIR Alternative is currently within the boundaries of three elementary school districts (Jamul-Dulzura Union School District (JDUHSD) CVESD, and Cajon Valley Union School District) and two middle school/high school districts (Grossmont Union High School District (GUHSD)and SUHSD). The Otay Ranch GDP/SRP planned that the Land Exchange EIR Alternative (Village 14) school district boundaries would be revised with the Specific Plan. A San Diego County Department of Education Transfer of Territory therefore is contemplated to adjust district boundary so that the CVESD and the SUHSD would serve the Land Exchange EIR Alternative.

13.4.2 Chula Vista Elementary School District

The CVESD, established in 1892, is the largest kindergarten through sixth grade (grades K– 6) school district in California, and serves nearly 29,600 students in 47 elementary schools (including 7 Charter Schools) with 1,634 certified employees and 1,323 classified employees for a total of 2,957 employees district-wide. Table 42 lists existing schools together with the capacity and enrollment of each. Capacity using existing facilities is approximately 31,000. Enrollment is currently approximately 29,600. Ten of the 47 schools are over capacity and three schools are near capacity (see Table 43).

A new K-6 school opened in Otay Ranch Village 2 in July 2017. With the addition of this school, the CVESD expects to have adequate capacity to house all Alternative Project students for the next 12 months. However, additional facilities may be necessary within the next five years. An additional elementary school is planned within Otay Ranch Village 3 and was expected to commence construction in 2011; however, construction has not yet begun and no construction update is available. Currently, several schools in eastern Chula Vista are over capacity, including Arroyo Vista Veterans, McMillin, and Salt Creek. The Learning Community and Mueller Elementary in western Chula Vista are also over capacity and is projected to be nearly 150 over capacity within five years.

Table 42: Chula Vista Elementary School District Enrollments

Schools	Estimated Enrollment 2013/2014	Approximate Capacity	Remaining Capacity
Allen	400	430	30
Arroyo Vista Charter	1,041	823	(218)
Camarena	949	874	(75)
Casillas, Joseph	595	711	116
Castle Park	433	432	(1)
Chula Vista Hills	561	578	17
Chula Vista Learning Comm. Chart	1,185	678	(507)
Clear View Charter	512	566	54
Cook, Hazel Goes	434	577	143
Daly Center	28	39	11
Discovery Charter	874	947	73
Eastlake	704	707	3
Feaster-Edison Charter	1,100	1,186	86
Finney, Myrtle	421	548	127
Halecrest	515	563	48
Harborside Accelerated	612	862	250
Hedenkamp, Anne and William	1,080	1,045	(35)
Heritage	916	983	67
Hilltop Drive	577	561	(16)
Juarez-Lincoln Accelerated	595	676	81
Kellogg, Karl H.	318	629	311
Lauderbach, J. Calvin	815	962	147
Liberty	734	800	66
Lorna Verde Comer	546	630	84
Los Altos	396	401	5
Marshall, Thurgood	737	701	(36)
McMillin, Corky	832	792	(40)
Montgomery Accelerated, John J.	380	379	(1)
Mueller Charter, Robert L	1,052	852	(200)
Olympic View	800	741	(59)
Otay Accelerated	597	712	115
Palomar	390	333	(57)
Parkview	369	450	81
Rice Comer, Lilian J.	682	697	15
Rogers, Greg (East)	473	487	14
Rohr, Fred H	348	385	37
Rosebank	591	669	78
Salt Creek	1,015	925	(90)
Silver Wing	400	468	68
Sunnyside	455	425	(30)
Tiffany, Burton C.	598	618	20
Valle Lindo	540	567	27

Valley Vista	564	561	(3)
Veterans	872	828	(44)
Vista Square	633	605	(28)
Wolf Canyon	661	882	221
Totals	**29,330**	**30,285**	**955**

13.4.3 Sweetwater Union High School District

The District serves approximately 40,249 students in 11 middle (grades 7-8) and 14 high school (grades 9–12) and more than 32,000 adult learners at 32 campuses. Several middle and high schools are planned or have been recently opened in the area. Otay Ranch High School is the nearest high school, however, the Land Exchange EIR Alternative is outside the designated attendance area. Unless the attendance boundary is changed High School Students will attend Olympian High School, which was opened in 2006 within Otay Ranch Village 7, and has a planned capacity of 2,600 students. The SUHSD owns a middle school site within Otay Ranch Village 11. The SUHSD intends to construct a new middle school (grades 7-8) with a capacity of 1,500 students. However, there is no construction schedule currently available. The SUHSD is coordinating with Otay Ranch property owners to identify an additional high school site in the southeastern portion of the Otay Valley Parcel.

Table 43: Sweetwater Union Middle School Enrollments

School Site	Program Capacity 100%	Estimated Enrollment	Capacity vs. Projected
Middle Schools			
Bonita Vista	1,724	1,044	680
Castle Park	1,906	732	1,174
Chula Vista	1,795	1,056	739
EastLake	1,861	1,720	141
Granger	1,491	1,043	448
Hilltop	1,622	1,037	585
Mar Vista Mid.	1,684	828	856
Montgomery Mid.	1,408	805	603
National City Mid.	1,410	787	623
Rancho del Rey	1,700	1,700	0
Southwest	1,712	719	993
Subtotal	**18,313**	**11,471**	**6,842**

Table 44: Sweetwater Union High School Enrollments

School Site	Program Capacity 100%	Estimated Enrollment	Capacity vs. Projected
High Schools			
Bonita Vista	2,795	2,478	317
Castle Park	2,514	1,396	1,118
Chula Vista	3,430	2,714	716
EastLake	2,996	2,892	104
East Hills Academy	132	48	84
Hilltop	2,889	2,042	847
Mar Vista	2,431	1,637	794
Montgomery	2,798	1,621	1,177
Olympian	2,468	1,896	572
Otay Ranch	2,985	2,618	367
San Ysidro	2,905	2,165	740
Southwest	2,954	1,572	1,382
Sweetwater	3,266	2,533	733
Palomar	648	373	275
Subtotal	**35,211**	**25,985**	**9,226**

13.5 Alternative Project Demand and Proposed Facilities

13.5.1 Student Generation Factors:

For long-range facilities planning purposes, the referenced school districts have recommended the following student generation projection factors:

Table 45: Student Generation Factors

School Type	Grades	Students per SF	Students per MF
Elementary	K-6	0.4114	0.3481
Middle School	7-8	0.1216	0.0516
High School	9-12	0.2291	0.1057

By phase and school category, the Land Exchange EIR Alternative is expected to generate students as determined in Table 45.

Table 46: Student Generation by Development Phase

Phase	Homes	Elementary Students	Middle School	High School
Single Family[1]	1,122	462	136	257
Multi Family	123	43	6	13
TOTAL	**1,245**	**504**	**143**	**270**

[1] The 162 - Age Restricted Units were not included for purposes of this analysis.

14.5.2 School Size Standards

School size standards adopted by the respective districts are as shown on the following Table. These sizes are "core" facilities only, and do not reflect modular, temporary structures which are routinely placed on campus to facilitate temporary expansion of classrooms, as necessary.

Table 47: School Size Standards

School Type	Grades	School Size
Elementary	K-6	750-1,000
Middle School	7-8	1,500
High School	9-12	2,400

13.5.3 School Siting Criteria

As established in the Otay Ranch GDP/SRP and Facility Implementation Plan, school facilities should be sited according to the following criteria. The ideal site should be:

1. At least eight (8) usable acres for an elementary school site, twenty-five (25) net usable acres for a middle/junior high school, and at least fifty (50) net usable acres for a senior high school, to adequately accommodate the loading and unloading of students, future expansion of facilities and offer design flexibility.
2. Centrally located to residential development to reduce bussing requirements, reduce walking distances for young children, encourage after-hours use of facilities by the public and discourage vandalism.
3. Adjacent to a street or road that can safely accommodate bike, foot and vehicular traffic. Middle school and high school sites should have no less than two sides with street frontage. Urban high schools are best located adjacent to collectors that can handle the increased traffic volume of student drivers and the entrance to the school should be signaled.

4. Topographically and environmentally safe and suitable to reduce site preparation costs and permit maximum use of the site for physical activities.
5. Site should be of sufficient usable acreage on one level and configuration to not limit the design of buildings and provide field and parking space.
6. Surrounded by land uses that produce a minimum of noise and traffic often associated with commercial and heavy industrial areas.
7. Located adjacent to parks to enable joint field and recreation facility uses.
8. Vacant and undeveloped with utilities stubbed to the site in order to reduce financial and costs of site acquisition.
9. Located such that utilities and services (e.g. cable television, fire protection, and emergency medical services) are or will be readily available, to reduce site development costs.
10. Near imminent development of adjacent properties to insure road and other necessary off-site improvements are available in a timely manner.
11. School siting should be in a location acceptable to the State Division of Aeronautics with regard to distance from Brown Field.
12. A safe distance, i.e., as required by law, from contaminants or toxins in the soil or groundwater from landfills, fuel tanks, agricultural areas, power lines, utility easements, etc.
13. Outside of floodplains; on stable soils; away from fault lines.
14. Integrated into the system of alternative transportation corridors, i.e., bike lanes, riding and hiking trails, and mass transit, where appropriate.

Additionally, Sweetwater Union High School District policy dictates that while it is acceptable and desirable to locate junior high/middle schools in close proximity to a high school, it is not desirable that either be located near an elementary school site. The Chula Vista Elementary School District has also stated a preference for this separation to avoid the mixing of older students with younger students.

13.5.4 Elementary School Demand

There are six existing CVESD elementary schools that may serve the Land Exchange EIR Alternative, including Heritage Elementary, McMillin Elementary, Hedencamp Elementary, Veterans Elementary, Wolf Canyon Elementary and Camerena Elementary. The newest K–6 school in Otay Ranch Village 2 (Saburo Muraoka Elementary School) opened in July 2017. Based on 2015/2016 enrollment information, Heritage, Hedencamp and Wolf Canyon elementary schools have capacity to serve Land Exchange EIR Alternative students on an interim basis. However, the CVESD will determine where

Land Exchange EIR Alternative students will be served based on available existing school capacity.

The Otay Ranch GDP/SRP land plan identifies an elementary school site within Village 14. Consistent with the Otay Ranch GPD/SRP, the Specific Plan reserves an elementary school site (8.3 ac.) within the Village 14 village core, adjacent to two neighborhood parks. the school site is identified as S-1 in the Site Utilization Plan for this PFFP.

Utilizing the student generation factors identified by the school districts, it is projected that approximately 504 elementary school students will result from development of the Land Exchange EIR Alternative. This figure is significantly less than the required capacity of a single elementary (K-6) school (750-1000 students). The Village 14 site would be reserved for acquisition by the school district or dedication to the school district, pursuant to an agreement between the developer and CVESD. It is anticipated a graded school site will be delivered to the CVESD, including utilities provided to the site and an all-weather road acceptable to the Fire Department and District. The Otay Ranch GDP/SRP School Facilities Implementation Plan is based on the premise that schools will be constructed when no greater than half of the school's projected students reside in the community; however, facility phasing is solely determined by the District based on available school capacity in the vicinity of the Land Exchange EIR Alternative.

If schools are overcapacity, the school districts typically utilize relocatable classrooms to temporarily house additional students until a new facility opens. In recognition of the impact on school facilities created by new development, the school districts and developers may enter into various mitigation agreements to ensure the timely construction of school facilities to house students from new residential development ("Mitigation Agreement"). Historically, developers and school districts have entered into a School Mitigation Agreement and school districts have utilized a community facilities district ("CFD") pursuant to the Mello-Roos Community Facilities District Act of 1982 (CVESD) to finance school facilities. However, per SB2926, in absence of a mitigation agreement, the developer shall pay the statutory school fees under state law in effect at the time of building permit issuance.

13.5.5 Middle School Demand

Secondary schools serving Otay Ranch include Otay Ranch High School, Olympian High School, Rancho del Rey Middle School, and EastLake Middle School. Enrollment and capacity in these schools are shown in Table 43. Based on the student generation factors identified by the SUHSD, it is projected that 143 middle school students will result from

development of the Land Exchange EIR Alternative. Throughout the district, additional middle school capacity is available. Students generated by the Land Exchange EIR Alternative would be expected to attend an existing middle school. Sweetwater Union High School District officials have indicated that students generated by the Land Exchange EIR Alternative may attend EastLake Middle School. In addition, a new middle school site has been identified within Otay Ranch. This middle school is located in Village 11 and has a projected capacity of 1,500 students. Once constructed, this facility may be used by middle school students generated by the Land Exchange EIR Alternative.

13.5.6 High School Demand

It is anticipated that 270 students would be generated by development of the Land Exchange EIR Alternative. Throughout the district additional high school capacity is available. Students generated by the Land Exchange EIR Alternative would be expected to attend an existing high school. Sweetwater Union High School District officials have indicated students generated by the Land Exchange EIR Alternative may attend Eastlake High School. In addition, is working with Otay Ranch property owners to identify a new high school site within the southeastern portion of the Otay Valley Parcel. This high school would have a projected capacity of 2,000 students. Once constructed, this facility may be used by high school students generated by the Land Exchange EIR Alternative. A construction schedule is not available at this time. SUHSD will determine where students will be served based on available capacity.

13.6 Adequacy Analysis

The Alternative Project student generation projections will necessitate construction of an elementary school. The Specific Plan reserves an elementary school site within the Village 14 core areas. To the degree that it can be determined at this time, this site is in compliance with the school siting criteria adopted by the Chula Vista School District.

To mitigate its impact on school facilities, the Land Exchange EIR Alternative is required to pay school mitigation fees pursuant to Gov. Code Section 65995. Alternatively, the applicants may enter a "School Mitigation Agreement" with the appropriate school district(s).

13.7 Inventory of Future Required Facilities

An 8.3-acre site has been identified and reserved as an elementary school location.

13.8 Threshold Compliance

A. Reservation of the school site shall be a requirement of development of the Land Exchange EIR Alternative.

B. Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall provide evidence or certification by the Chula Vista Elementary School District (CVESD) that any fee charge, dedication or other requirement levied by the school district under state law has been complied with or that the district has determined the fee, charge, dedication or other requirements do not apply to the construction or that the applicant has entered into a school mitigation agreement. School Facility Mitigation Fees shall be in accordance with the fees in effect at the time of building permit issuance.

C. The Alternative Project Applicant shall provide evidence from the CVESD that each school site has been determined by the district to be acceptable for school use.

13.9 Financing School Facilities

California Government Code section 65995 et. seq. and Education Code Section 17620 et. seq. authorizes school districts to impose facility mitigation exactions on new development as a way to address increasing enrollment caused by that development.

Although the collection of school fees is one method available to defray the cost of new development, it is not an acceptable solution since the maximum amount that could be collected by law represents less than one-fourth the cost to construct schools.

In recognition of this funding deficiency, it is the desire of each district to fully mitigate the facility impacts caused by a master planned community via the creation of a Mello Roos Community Facilities District. The following existing Community Facilities Districts (Mello-Roos Districts) have been created by each district:

SUHSD

CFD No. 1 EastLake
CFD No. 2 Bonita Long Canyon
CFD No. 3 Rancho del Rey
CFD No. 4 Sunbow
CFD No. 5 Annexable
CFD No. 6 Otay Ranch
CFD No. 7 Rolling Hills Estate
CFD No. 8 Coral Gate (Otay Mesa)
CFD No. 9 Ocean View Hills
CFD No. 10 Remington Hills/Annexable
CFD No. 11 Lomas Verdes
CFD No. 12 Otay Ranch (Village 1 West)
CFD No. 13 San Miguel Ranch
CFD No. 14 Otay Ranch Village 11
CFD No. 15 Otay Ranch Village 6 (ORC)
CFD No. 16 Otay Ranch Village 7
CFD No. 17 Otay Ranch Village 2
CFD No. 18 Otay Ranch Millennia
CFD No. 19 Otay Ranch Village 2/PA 12
CFD No. 20 Otay Ranch Village 3

CVESD

CFD No. 1 EastLake
CFD No. 2 Bonita Long Canyon
CFD No. 3 Rancho del Rey
CFD No. 4 Sunbow
CFD No. 5 Annexable
CFD No. 6 Otay Ranch
CFD No. 10 Annexable for future annexations
CFD No. 11 Otay Ranch (Lomas Verde)
CFD No. 12 Otay Ranch (Village 1, West)
CFD No. 13 San Miguel Ranch
CFD No. 14 Otay Ranch Village 11
CFD No. 15 Otay Ranch Village 6 (ORC)
CFD No. 16 Otay Ranch Village 7
CFD No. 17 Otay Ranch Village 2
CFD No. 18 Otay Ranch Millennia
CFD No. 19 Otay Ranch Village 2/PA 12
CFD No. 20 Otay Ranch Village 3

Based on historical data available from each district an estimate of costs for the construction of school facilities on a per student basis is provided. Both districts follow state standards for determining the costs and size for school construction. The cost for a high school, including land acquisition, is approximately $79,841.55 per student (2016 dollars). The cost for a middle school, including land acquisition, is approximately $43,259.11 per student (2016 dollars). The cost for an elementary school, including land acquisition, is approximately $51,699 per student (2016 dollars). Because the Alternative Project is generating significantly fewer students than the required threshold, it is not anticipated that they will be required to allocate land towards or develop a middle or high school facility.

Table 48: Estimated School Costs

Elementary School Cost	
(1,000 students) ($51,699/student w/ land cost)	$51,699,000
Middle School Cost	
(1,500 students) ($43,259/student w/ land cost)	$64,888,500
High School Cost	
(2,400 students) ($79,841/student w/ land cost)	$191,619,720

14.0 Animal Control Facilities

14.1 Otay Ranch GDP/SRP Threshold

Participate in programs to provide animal control facilities sufficient to provide adequate square feet of shelter space per Otay Ranch dwelling unit.

14.2 Service Analysis

Animal control facilities and services for the Land Exchange EIR Alternative are provided by the County. County animal control facilities protect the health and welfare of both residents and domestic animals. Build-out of the Land Exchange EIR Alternative may generate the need for additional or expanded animal control facilities.

14.3 Alternative Project Processing Requirements

Demonstrate conformance with the *Otay Ranch Facility Implementation Plan*.

14.4 Existing Conditions

The County and the City of Chula Vista provide animal control services for the Otay Ranch planning area. The County provides the service for the unincorporated area including the Alternative Project site. The Humane Society provides animal shelter and related services and adoption, humane disposal and investigation for the County.

The County provides services in all unincorporated portions of the county and in nine cities within the county by contract. Animal control staff is on premises 24 hours a day, seven days per week, and private veterinarians provide emergency services on a contract basis. The department provides the following services:

- Emergency care for injured animals
- Surveillance for rabies, rabies vaccination clinics and quarantine of biting animals
- Investigation/prosecution of anti-cruelty laws
- Control of vicious or stray animals
- Licensing of dogs
- Adoption and lost pet services
- Spay/neuter referral and information
- Public education and information

- Inspection and licensing of private kennels
- Humane disposal of injured and unwanted animals
- Shelter domestic animals, reptiles and livestock
- Senior adoption and foster care programs
- Animal rescue – provides animal rescue to all cities in case of disasters

The South Shelter is located approximately 8 miles at 5821 Sweetwater Road in Bonita and currently provides animal control services to the area in the vicinity of the Land Exchange EIR Alternative site.

14.5 Alternative Project Demand and Proposed Facilities

Build-out development of the Land Exchange EIR Alternative will result in a total of 1,530 homes. This increase in population, in conjunction with the proportional regional growth of the area, will result in the need for additional or expanded animal control facilities. The Facility Implementation Plan indicates that a ratio objective of 0.13 sq. ft. of animal control facilities per home should be utilized in assessing demand. As a result, the Land Exchange EIR Alternative will result in the need for 199 sq. ft. of animal control facilities.

14.6 Adequacy Analysis

The Otay Ranch Facility Implementation Plan provides that animal control facility requirements be addressed through off-site expansion of County of San Diego and City of Chula Vista facilities, as appropriate, based on jurisdiction. No specific animal control facilities will be required of the Land Exchange EIR Alternative. The County will continue to monitor development rates in the area to determine continued compliance with the law animal control threshold.

14.7 Inventory of Future Required Facilities

No specific facilities will be required of the Land Exchange EIR Alternative.

14.8 Threshold Compliance

Based upon the analysis contained in this PFFP, it is projected that the animal control threshold will be maintained throughout the development of the Land Exchange EIR Alternative.

14.9 Financing Animal Control Facilities

Animal Control facilities serving the unincorporated area have been funded from the General Fund and service fees. The fiscal analysis concluded that the Land Exchange EIR Alternative will result in a net fiscal annual surplus at build-out of $1,225,048. Additionally, the Otay Ranch GDP/SRP obligates the Land Exchange EIR Alternative to contribute its proportionate fair share to any regional impact fee program, if one were to be established. Thus, the Land Use Alternative is projected to result in sufficient tax revenues to accommodate the demand for Animal Control Facilities.

15.0 Regional Facilities Plans

15.1 Otay Ranch GDP/SRP Requirement

The Otay Ranch GDP/SRP requires the preparation of Regional Facilities Plans concurrent with the Specific Plan for the following regional facilities:

- Arts and Cultural Facilities
- Cemetery Facilities
- Health and Medical Facilities
- Community Purpose Facilities
- Childcare Facilities
- Social and Senior Service Facilities
- Correctional Facilities
- Justice Facilities
- Integrated Solid Waste Management

Other facilities required to be addressed at the Specific Plan level are Solid Waste and Childcare facilities.

15.2 Service Analysis

The following establishes the Regional Facilities Plans for each facility as required by the Otay Ranch GDP/SRP.

Arts and Cultural

The Otay Ranch GDP/SRP anticipates a multi-use cultural complex in the Eastern Urban Center. In addition, public art and artistic public improvements will be visible in the design of the Alternative Project. Elements such as landscaping, gateways, signage, street lights, paving materials, fencing, street and park furniture and other key focal points will compliment and add to the design character. These designs are addressed in the Proctor Valley Village 14 Design Plan.

Additionally, the community center (PP-5) includes a raised band stand and paved plaza which can be used as a stage for artistic performances.

Cemetery Facilities

The Otay Ranch GDP/SRP requires that each Specific Plan confirm the Otay Ranch GDP/SRP conclusion that existing cemetery capacity is adequate to serve Otay Ranch residents. The Land Exchange EIR Alternative residents' demand for cemetery space can

be met by the nine cemeteries, memorial parks or mausoleums within the South County area, including Cypress View, Glen Abbey, Greenwood, Holy Cross, La Vista, Mount Hope, Mount Olivet and San Ysidro.

Health and Medical

The Otay Ranch GDP/SRP requires opportunities be provided to health care providers to consolidate health care services as part of the Specific Plan review process. Based on existing and projected services provided in the South County, no additional acute hospital facility will be needed to serve the Land Exchange EIR Alternative. Both Scripps Memorial Hospital and Sharp Chula Vista Medical Center have the capacity to meet the medical needs of the Land Exchange EIR Alternative residents. The area will also be served by Paradise Valley Hospital and other local private facilities

In the area of mental health, recent service trends indicate an increase in day treatment and out-patient services as an alternative to traditional therapy in a hospital setting. This change in service delivery will compensate for increased service demand resulting from the Land Exchange EIR Alternative population.

Build out of the Land Exchange EIR Alternative will generate an incremental demand for additional nursing home beds. It is anticipated this demand can be met in existing nursing facilities within the South County. Build out will also generate the need for medical practitioners (doctors, dentists, chiropractors and allied health professionals). Space for purchase or lease, which is accessible to the public and suitable for siting medical practitioner services, will be available within other retail/office areas in the City of Chula Vista, the Mixed-Use Site, and the Eastern Urban Center of Otay Ranch.

Social and Senior Service Facilities

The Otay Ranch GDP/SRP establishes goals for ensuring Otay Ranch residents have adequate access to sources of governmental and private social and senior services programs. Social service programs are mandated by State and Federal statutes and regulations and are largely funded from State and Federal sources. The public sector provides many basic support services to needy segments of the population. At the regional level, the County has the primary responsibility to provide social services to County residents. The Department of Social Services serves one out of every eleven County residents, or over 100,000 persons each month.

There are numerous non-profit health and social service organizations located in the South County area. The County Area Agency on Aging provides social and nutritional programs, legal services, ombudsman programs and services to prevent or postpone institutionalization.

Correctional and Justice Facilities

The Otay Ranch GDP/SRP Correctional and Justice Facilities plans do not apply to Land Exchange EIR Alternative.

Childcare Facilities

This section implements the Otay Ranch GDP/SRP requirement to prepare a Childcare Plan. The Alternative Project Land Plan provides opportunities to locate facilities to meet the needs of the community. Childcare facilities may be located within commercial/mixed use centers and Small Family Day Cares for children (8 or fewer children) are permitted within single family resident districts.

Family Care Homes

Home-based child care includes small family day care homes (SFDCH) which serve 6 children and large family day care homes (LFDCH) which serve 7-12 children. Consistent with the Land Exchange EIR Alternative Development Regulations, SFDCHs could potentially be located within residential zones in the Specific Plan area.

Child Care Center

Facility–based childcare may be non-profit or commercial facilities located in non-residential land use areas of the Land Exchange EIR Alternative. The Mixed Use Site may accommodate childcare facilities. The State has adopted regulations related to licensing, application procedures, administrative actions, enforcement provisions, continuing requirements and the physical environment for child day care and day care centers. All child care facilities will comply with state, as well as local regulations.

Community Purpose Facilities

Community Purpose Facilities (CPF) and Regional Purpose Facilities (RPF) are not required in the County and, therefore, do not apply to the Land Exchange EIR Alternative.

Integrated Solid Waste Management

The Land Exchange EIR Alternative will comply with the Otay Ranch GDP/SRP requirements for a waste management system, including:

- Curbside recycling
- Green waste recycling
- Material recovery facility
- A household hazardous waste collection facility
- Landfill capacity

Curbside pickup and recycling will be accomplished through a contract with a local service provider. Recyclables will be sorted at curb-side.

It is that anticipated green waste collection will be offered every other week, which will be established by the local waste service provider. Trash and recycling service will occur on a regular basis depending on the local waste service provider's operation. To promote recycling, it is anticipated that a waste service provider will offer different monthly trash service rates depending on the size and type of each residences trash container.

16.0 Public Facility Financing

16.1 Overview

Public facilities are generally provided or financed in one of the following ways:

Subdivision Exaction – Dedications and/or developer-constructed improvements, reservations of land, and supplemental improvements (reimbursement agreements) are financed as a condition of Alternative Project entitlements. Exactions must substantially further a legitimate governmental interest, a nexus between the impact and the exaction must exist, and the exaction cannot deny a property owner economically viable use of its land.

Development Impact Fee – Funded through the collection of a fee or other consideration as a condition to approval of a final subdivision map. Such fee assists to defray the cost of constructing planned regional public improvements for which an Alternative Project contributes an impact. Impact fees must be fairly apportioned either on the basis of benefits conferred or on the need created by the subdivision.

Debt Financing – Financing through a defined district of landowners in order to fund the up-front provision of a public facility.

County General Fund – Payment of general taxes to the County General Fund serve to pay for many public services throughout the County. Those facilities and services identified as being funded by General Fund sources represent those that will benefit not only the residents of the Alternative Project, but also residents within the County in general.

16.2 Subdivision Exactions

In return for receiving a permit to allow development of land, and in response to the Alternative Projected development's demand for public services, the County may impose exactions such as a dedication of land or money in order that public facility improvements can be made in a timely manner. On the Alternative Project, neighborhood-level public improvements will be developed simultaneously with related residential subdivisions and other resort developments. The use of subdivision conditions and exactions, where appropriate, will ensure that the construction of necessary facilities (supply) is timed in concert with actual

development (demand). Such exactions must articulate the specific Alternative Project for which the exaction is being conditioned.

16.3 Development Impact Fee Programs

The County may impose development impact fees or charges for the construction of public improvements. This may occur for public facilities and utilities for which an account has been established and funds appropriated for the Alternative Project(s). These fees will contribute to the financing of capital facilities improvements within the County. Such fees are adopted in accordance with an established formula as set by State Law.

16.4 Debt Financing Programs

The County has utilized assessment mechanisms and Mello-Roos Community Facility Districts (CFD) to finance a number of public street improvements, as well as regional sewer and drainage facilities. School Districts within the County have also implemented CFD's to finance school facilities.

Such districts may be imposed for the purpose of acquiring land, constructing improvements and even maintaining certain facilities for the benefit of the public. The general administration of the district is the responsibility of the public agency.

Such debt financing (special districts) may be appropriate when the value or benefit of the public facility can be assigned to each specific property within an adopted district, and assessments levied in accordance with this benefit distribution. Assessments are levied in specific amounts against each individual property on the basis of this relative benefit.

It is anticipated that certain facilities and fees will be financed through the establishment of one or more CFDs. Preliminary estimates indicate that the Alternative Project can generate upwards of $82,000,000 in bond proceeds through a CFD(s) which can be allocated towards the construction of public facilities. (Bonding capacity estimate based on 1,530 units with $785,000 average unit price and a 6% bond interest rate.

16.5 County General Fund Impact

16.5.1 Introduction

As outlined in the Fiscal Impact Analysis, dated November 2017, by Development Planning and Financing Group, two basic methodologies were utilized in estimating County revenues and expenditures; the case study and per capita/unit multiplier methods. The case study method was used to estimate secured property tax, sales tax, transient occupancy tax ("TOT") and real property transfer tax. The case study method is based on specific characteristics of the Alternative Project from which revenues can be estimated. Appropriate County officials were contacted to identify actual tax rates, fees and costs. The per capita/unit multiplier method, which represents a more general approach were utilized to estimate licenses, permits and franchise fees, fines, forfeitures, other revenues and fees and all expenditures. The County of San Diego FY 2015-2016 Budget (the "Budget") was utilized to estimate per capita/unit multipliers.

16.5.2 Alternative Project Demographics and Land Uses

In developing per unit/acre multipliers, the PFFP analysis utilized demographic and land use information related to the County as a whole and, more specifically, the Alternative Project. Included in table below are population, housing and land-use characteristics.

Table 49: General Assumptions in Fiscal Analysis

County of San Diego		**Sources**
Population	3,288,612	County of San Diego FY 16-18 Budget (pg. 12)
Employment	1,563,800	County of San Diego FY 16-18 Budget (pg. 16)
Persons per household	3.6	SANDAG Estimate – 91914 zip code
Otay Ranch – Village 14		
Estimated Population	5,508	
Estimated Employees	41	DPFG
Housing Units	1,530	Applicants
Commercial – Retail Mixed-Use Acres	3.6	Applicants

16.5.3 Revenues

Annual revenues at build-out for the County resulting from the development of the Alternative Project are estimated in this section. The major revenue sources which are expected to be generated from the Alternative Project and detailed in this section include secured property tax, sales and use tax, transient occupancy tax, real property transfer tax, taxes in-lieu of motor vehicle license fee, license revenues, permit fees, franchise fees, revenues from fines, forfeitures and penalties, revenue from use of money and property, charges for various current services and other miscellaneous revenues. The following section details each of the revenue sources and the methodology employed to estimate revenues from the subject development. All dollar figures are presented at build- out and in 2017 dollars (no inflation rates were used).

16.5.3.1 Secured Property Tax

Secured property tax revenues generated from the proposed development were calculated on the basis of a one-percent ad valorem tax rate on the estimated current market value of the residential and commercial development. The subject property is in the tax rate areas 79006 and 63165. According to the County of San Diego Property Tax Services Department, the County share of the one-percent ad valorem tax within the subject property tax rate area is approximately 21.3954%.

Market values (assessed values) for the residential units were estimated using information based on actively selling projects in the competitive market, current market conditions, market research and projected future demand per neighborhood as shown in Table 3 of Appendix A. Market values (assessed values) for commercial - retail mixed uses were estimated per Dollars & Cents of Shopping Centers by Urban Land Institute, dated 2008.

These identified market values also represent the assessed values. Although assessed values increase two percent per year and readjust after the property resells, this analysis assumes no inflation and all values remain in 2017 dollars. Included in the attached Table 3 of Appendix A is the assessed value at the build-out of the development which is estimated at $1,207,838,674 for the Alternative Project.

At Alternative Project build-out, the County's General Fund share of the annual property tax (post ERAF) is estimated at **$2,584,219** (refer to Table 5 of Appendix A). Of this amount, $136,353 goes to a flood control fund, $365,371 goes to the County Library,

$229,356 goes to the Rural Fire Protection District, and the remaining $1,853,139 goes to the County General Fund.

16.5.3.2 Sales Tax

Under the California Sales and Use Tax Law, the sale of tangible personal property is subject to sales or use tax unless exempt or otherwise excluded. When the sales tax applies, the use tax does not apply and the opposite is also true. The sales tax is imposed on all retailers for the privilege of selling tangible personal property in the State and is measured by the retailer's gross receipts.

Sales taxes provide a major revenue source in the State of California (the "State"). All cities and counties in the State levy a basic one percent sales tax and have the option to levy additional sales taxes under certain circumstances. In general, sales taxes are imposed on the retail sale or the use of tangible personal property in the State.

Non-Residential Sales Tax

Commercial (retail-mixed use) taxable sales are Alternative Projected at $2,584,760 at build-out as shown below and calculated in Table 8 of Appendix A:

Table 50: Estimated Non-Residential Sales Tax Revenues

Probable Tenant	Type Bldg. SF Estimated	Sales per SF (a)	Estimated % Taxable	Estimated Taxable Sales (per SF)	Total Estimated Taxable Sales
Mixed Use Areas					
Convenience Store	1,500	$ 429	75%	$322	$482,625
Coffee Shop	1,500	405	100%	405	607,500
Office	3,500	N/A	0%	-	-
Quick Serve Food	4,000	246	100%	246	985,280
Dry Cleaner	1,500	200	0%	-	-
Sandwich Shop	1,500	290	100%	290	434,355
Nail Salon	1,500	200	25%	50	75,000
Total	**15,000**				**$2,584,760**
Annual Sales Tax to County		**1.00%**			**$ 25,848**

Footnotes:

(a) Per Dollars & Cents of Shopping Centers (2008) by Urban Land Institute.

One percent of the taxable sales in the amount of **$25,848** is generated by the sales tax.

Off-site Sales Tax

Retail taxable sales generated from total residential purchasing power are projected at $55,669,551 based on the assumption that residents will generate total retail purchases at 32.5% of household income. Household income is estimated at 35% percent of annual housing costs, which are estimated at $151,723 based on a 20% down payment, 5.0% interest rate and 30-year loan term on an average sales price of $786,859. Taxable off-site sales captured in the County from new residents of the Alternative Project are estimated at a 4.2% percent capture rate of the taxable sales and total $3,228,834.

The County has a sales tax rate of one percent. The Alternative Project's indirect sales tax to the County is estimated to be **$32,288** as shown in Table 9 of Appendix A.

Table 51: Estimated Off-site Sales Tax Revenue

Spending by Residents	Factor	
Aggregate Incomes (from Appendix A, Table 9)	$152K per Unit	$232,560,000
Consumer Expenditures (a)	73.7%	$171,290,926
Taxable Spending (a)	32.5%	$55,669,551
Less: On-site Capture (b)	4.2%	$(2,338,121)
Less: Incorporated City Capture (b)	90.0%	$(50,102,596)
Net Taxable Spending in County		$3,228,834
Annual Sales Taxes to County	1.0%	32,288

Footnotes:
(a) Per U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey, 2016-17 for San Diego Metropolitan Statistical Area (MSA).
(b) Capture percentage represents DPFG's estimate based on location relative to other retail establishments in the market area.

16.5.3.3 Real Property Transfer Tax

Sales of real property in the County are taxed at a rate of $1.10 per $1,000 of the sales price. Assuming that the average turnover rate for residential property is once every ten years and the average turnover rate for nonresidential property is once every 20 years. The following formulas, which take both the transfer tax formula and the average

turnover rate into account, were utilized to yield average annual per unit real property transfer tax.

Single/Multi Family Residential	$1.10/$1,000 x 1/10 = 0.00011
Commercial	$1.10/$1,000 x 1/20 = 0.000055

Using these formulas, an estimated annual average real property transfer tax can be calculated. The Alternative Project would generate **$132,645** (refer to Table 7 of Appendix A) in average annual real property transfer tax at build-out.

Table 52: Estimated Property Transfer Tax Revenue

	Residential	Commercial	Total
Total Assessed Value (from Appendix A, Table 3)	$1,203,893,674	$3,945,000	$1,207,838,674
Turnover Rate (a)	10.00%	5.00%	
Annual Taxable Assessed Value	$108,930,855	$197,250	$109,128,105
Property Transfer Tax Rate (b)	0.110000%	0.110000%	0.110000%
Total Annual Property Transfer Taxes	**$132,428**	**$217**	**$132,645**

Footnotes:
(a) Based on assumption that residential property will change ownership once every 10 years and commercial property will change ownership once every 20 years.
(b) Represents property transfer tax rate of $1.10 per $1,000 of sale or resale value per Revenue and Taxation Code Section 11911-11929.

16.5.3.4 Taxes In-Lieu of Motor Vehicle License Fee

In May 2004, Governor Schwarzenegger proposed a swap of city and county VLF revenue for additional property tax share as part of a budget agreement between the State and local governments. The swap was included in the 2004 budget package. Under this legislation, property tax in-lieu of VLF is allocated to Cities and Counties pursuant to a complex formula involving each agencies relative share of assessed value. The property tax in-lieu of VLF revenue that will be generated by the Alternative Project can be estimated by determining the (i) percentage growth in the total assessed value of the unincorporated area of the County attributable to the Alternative Project, and multiplying by (ii) the property tax in-lieu of VLF revenue of $372,728,369 expected to be received by the County in FY 2016-18 per the County Budget. Based on these

calculations, the Alternative Project is anticipated to generate **$6,645,660** annually in property tax in-lieu of VLF revenue, as shown in the table below (reference Appendix A, Table 6).

Table 53: Estimate in Lieu MVLF Revenues

FY 2016/17 In Lieu MVLF Allocation to County	$ 372,728,369 (a)
FY 2016/17 Unincorporated County AV	$ 67,214,634,803 (b)
Total Alternative Project Assessed Value from Table 3	$ 1,207,838,674
Less: Existing Assessed Value	$ (9,417,336) (c)
Net (New) Assessed Value	$ 1,198,421,338
AV Growth from Alternative Project	1.783%
Annual County Property Taxes In Lieu of MVLF	**$ 6,645,660**

Footnotes:
(a) Per County of San Diego Fiscal Year 2016-2018 Adopted Budget (pg. 85).
(b) Per County of San Diego Assessor's Office.
(c) Per FY 2016-2017 Tax Bills.

16.5.3.5 Other Revenues

The County receives various other revenues analyzed under the FIA. These include (i) franchise, license, and permit revenues, (ii) fees, fines, and forfeitures, (iii) penalties & cost delinquency taxes, and (iv) miscellaneous revenues. These revenues have been estimated using a Per Capita & 50% Employee Multiplier against the County budgeted revenues for each respective revenue category. Based on the total Per Capita & 50% Employee Multiplier of $4.90, total annual "other" revenues are anticipated to be **$27,075** at buildout, as seen in Appendix A, Table 10.

Licenses, Permits and Franchises

The FIA groups numerous revenues into the category of license and permit fees. These revenues include: animal licenses, kennel license, business licenses, marriage licenses, miscellaneous licenses and permits, food handling licenses, construction permits, biohazardous waste permits, recreation fees and other miscellaneous permits and fees. For these revenues, except for the business licenses, miscellaneous licenses and permits, and the food handling licenses, per capita multipliers were developed by dividing the Budget's respective revenue items by the County's total population. Similar methodology was used to determine the per capita and per employee multipliers for the business licenses, miscellaneous licenses and permits, and the food handling licenses,

except that the per capita and per employee multipliers were developed by dividing the Budget's respective revenue by the County's total population and employment (refer to Table 10 of Appendix A). Franchise fees are charged to various entities in exchange for the exclusive right to operate franchises within the County's jurisdiction. Franchise, license and permit fees for the Alternative Project are estimated at $1.34 per capita and per employee based on these budgeted revenues. Based on the per capita and per employee amount calculated from the County budget, the Alternative Project would generate **$7,428** in total licenses, permits and franchises at Alternative Project's build-out (refer to Table 10 of Appendix A).

Fines, Forfeitures and Penalties

The County Budget for fines, fees and forfeitures totals $ 1,554,323 for FY 2016/18. This revenue is projected at $0.38 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the Alternative Project will generate **$2,111** in total fines, forfeitures and penalties at build-out (refer to Table 10 of Appendix A).

Penalties and Cost Delinquency Taxes

The County Budget for revenue from penalties and cost delinquency taxes total $ 11,911,952 for FY 2016/18. This revenue is Alternative Projected at $2.93 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the Alternative Project would generate **$16,178** in total revenues from the use of money and property at build-out (refer to Table 10 of Appendix A).

Interfund Charges/Miscellaneous Revenues

The County Budget for revenue from interfund charges and miscellaneous revenues total $1,000,000 for FY 2016/18. This revenue is Alternative Projected at $0.25 per capita based on this budgeted revenue. Based on the per capita amount calculated from the County budget, the Alternative Project would generate **$1,480** (refer to Table 10 of Appendix A) in total charges for current revenues at build-out.

16.5.4 Costs

Annual costs at build-out resulting from development of the Alternative Project are outlined in this section. The annual cost categories to be impacted by the subject development include the general function (legislative/administrative services, finance

services, counsel services, personnel services, elections services, property management services, plant acquisition services, promotion services and other general services), public protection function (judicial services, police protection services, detention and correction services, protective inspection services, other protection services and family support services), health and sanitation function (health services and sanitation services), education function (library services, agriculture education services), recreation and cultural function (recreation facilities) and contingency function. These annual costs are utilized in estimating the per capita expenditure or a percentage of the direct cost expenditures for the Alternative Project. The methodologies used to estimate Alternative Project expenses are discussed in more detail in the following sections. Similar to the revenue analysis, all figures shown are in current (2017) dollars.

16.5.4.1 Public Safety

Public Safety costs include expenses related to the District Attorney, Sheriff, Fire, Probation Department, trial courts, child support services and other services, many of which are provided on a County-wide basis to all County residents. However, certain services such as Fire and Sheriff are only provided to unincorporated areas, except for certain contractual arrangements. For example, as noted in Section 8.2, the Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. Also, the County Fire Authority has contracts in place with various other agencies. Due to the abbreviated scope of this analysis and the unavailability of detailed breakdowns of certain County Budget data, this analysis does not dissect and stratify the County Public Safety budget and attempt to allocate specific costs to the Alternative Project based on each expense subcategory and associated service area or population except for fire services. Instead, the FIA uses a Per Capita & 50% Employee (Unincorporated) Multiplier against the entire Public Safety general purpose revenue allocation of $706,000,000 less $33,000,000 allocable to the County Fire Authority for fire services, resulting in a multiplier of $1,119.55 per person. This methodology is viewed as being conservative in that the service population utilized for spreading costs represents only the unincorporated area, despite the fact that many of the applicable services are provided on a county-wide basis. Based on this multiplier, total annual public safety costs (excluding fire services) are estimated at **$6,189,230** at buildout, as seen in Appendix A, Table 11.

16.5.4.1.1 Fire Protection

The County Fire Authority in conjunction with the Department of Forestry and Fire Protection ("CAL FIRE") are anticipated to be responsible for providing fire services to the Alternative Project. As previously noted, for purposes of this FIA we have assumed that the Alternative Project will include an onsite fire station and fully fund the station's annual operating costs. It is assumed that the fire station will be staffed with a 4-person crew. The Country Fire Authority has provided DPFG with an annual estimate for staffing costs and monthly operating expenses. Reserve fund, operating and engineering estimates are based on conversations with the County Fire Authority on November 4, 2015. Based on these estimates, the total annual fire service costs are estimated at **$1,512,257** at buildout, as shown in the table below (reference Appendix A, Table 13).

16.5.4.1.2 Law Enforcement

The County Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. In these cities the Sheriff's Department serves as their police department, providing a full range of law enforcement services including patrol, traffic and investigative services. In the unincorporated (non-city) areas, such as where the Alternative Project is located, the Sheriff's Department provides generalized patrol and investigative services. The California Highway Patrol has the primary jurisdiction for traffic services in unincorporated areas. The Sheriff's Department service area covers approximately 4,200 square miles. Sheriff's Department facilities located in unincorporated areas provide general law enforcement patrol, crime investigation, and crime prevention services. To effectively serve this extensive geographic area, the Sheriff's Department Law Enforcement Services Bureau operations are organized under a system of Command stations, substations, offices and storefronts. A separate rural enforcement area addresses the special needs of outlying areas patrolled by resident deputies. The operational structure is flexible, and areas may be realigned in order to provide better response to citizen calls for service, to ensure a balance of resources, and to be more responsive to community needs.

The Sheriff's Department Law Enforcement Operations Command Areas have further been divided into beat districts which serve the unincorporated County. The Alternative Project is located in the Imperial Beach beat district which is serviced via the Imperial Beach Substation. The Sheriff department is currently planning to locate a storefront within the Alternative Project. The cost of sheriff services for the Alternative Project is included in the public safety costs.

16.5.4.2 Health and Human Services

The Health and Human services cost category includes regional operations, aging and independence services, behavioral health services and child welfare services. Using a Per Capita & 50% Employee Multiplier of $17.20, total annual health and human services costs are anticipated to be **$95,070** at buildout, as seen in Appendix A, Table 11.

16.5.4.3 Land Use and Environmental

The Land Use and Environment Group cost category includes agriculture, weights and measures, environmental health, parks and recreation, planning and land use and public works costs. Using a Per Capita & 50% Employee Multiplier of $13.29, total annual land use and environmental costs are anticipated to be **$73,476** at buildout, as seen in Appendix A, Table 11.

16.5.4.4 Community Services

The Community Services Group cost category includes parks, library, roads, animal services, housing and community development, purchasing and contracting, the County Executive Office and Registrar of Voters. Using a Per Capita & 50% Employee Multiplier of $5.36, total annual community services costs are anticipated to be **$29,608** at buildout, as seen in Appendix A, Table 11.

16.5.4.5 Finance and General Government

The Finance and General Government services cost category includes executive office, assessor/recorder/county clerk, treasurer – tax collector, auditor and controller, county counsel and human resources costs. Using a Per Capita & 50% Employee Multiplier of $33.09, total finance and general government costs are anticipated to be **$182,942** at buildout, as seen in Appendix A, Table 11.

16.5.4.6 Finance - Other

Other finance costs include community Alternative Projects, community enhancement, contingency reserve, and countywide general expense costs. Using a Per Capita & 50% Employee Multiplier of $42.84, total other finance costs are anticipated to be **$236,860** at buildout, as seen in Appendix A, Table 11.

16.5.4.7 Finance – San Diego Flood Control

For the purposes of this analysis, the San Diego Flood Control annual budget was included in Project related County expenditures. Using a Per Capita & 50% Employee Multiplier of $1.33, total other finance costs are anticipated to be **$7,349** at buildout, as seen in Appendix A, Table 11.

16.5.5 Net Fiscal Impact

Utilizing the previously mentioned methodologies, estimated net fiscal impact at build-out is presented in Table 1 of the Appendix A. As previously mentioned, all values are in 2008 dollars. No annual adjustments to revenues or costs were utilized.

Fiscal annual revenues are estimated at $9,705,503 at the Alternative Project's build-out and fiscal annual costs are estimated at $8,480,456 at the Alternative Project's build-out, resulting in a net fiscal annual surplus at build-out of $1,128,294.

Table 54: Net Fiscal Impact

Revenues/(Expenditures)	Estimated Revenue	Estimated Expenditures
Recurring Revenues		
Property Tax	$ 2,584,219	
Sales Tax (onsite)	25,848	
Sales Tax (off-site)	32,288	
Real Property Transfer Tax	132,645	
Taxes In-Lieu of Motor Vehicle License Fee	6,645,660	
Other Revenues	27,075	
Recurring Expenditures		
Public Safety (excluding Fire)		$6,189,230
Fire Protection		1,512,257
Health and Human Services		95,070
Land Use and Environmental		73,476
Community Services		29,608
Finance and General Government		182,942
Finance Other		236,860
Total Revenues and Costs (Including Fire)	**$9,447,736**	**$8,319,442**
Total Surplus	**$1,128,294**	

16.6 Other Methods Used to Finance Facilities

State and Federal Funding – Historically, federal and state financial and technical assistance programs have been available for County agencies to utilize, particularly for public school districts.

Developer Reimbursement Agreements – Certain facilities that are off-site of the Alternative Project site, but are necessary to serve the Alternative Project may provide regional benefits beyond the Alternative Project. Under such circumstances, developer reimbursement agreements for up-front funding of improvements can be executed to provide for a future payback to the developer from other properties benefiting from the improvement. Such benefiting developments are required to reimburse their fair share of costs for the shared facility at the time that their Alternative Project is issued permits for development.

APPENDIX A

FISCAL IMPACT ANALYSIS

FISCAL IMPACT ANALYSIS
FOR
Otay Ranch Village 14 and Planning Area 16/19 – Land Exchange EIR Alternative

Febraury, 2018

Prepared By:

DPFG
DEVELOPMENT PLANNING & FINANCING GROUP, INC.

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Appendix A – Alternative Project Site Plan

Appendix B – Fiscal Impact Analysis Tables

1. Purpose of Fiscal Impact Analysis

This Fiscal Impact Analysis ("FIA") has been prepared to determine the estimated fiscal impacts on the County of San Diego ("County") in connection with The Land Exchange Alternative ("Alternative Project") is located within Otay Ranch Village 14 and Planning Areas 16 and 19 in the Proctor Valley parcel of Otay Ranch. The reader should be aware that the FIA contains estimates or projections of the Alternative Project's future revenue and cost impacts on the County and actual fiscal results may vary from estimates because events and circumstances may occur in a manner that is different than projected in the FIA. The primary purpose of this FIA is to estimate the Alternative Project's net fiscal impact on the County's General Fund upon build-out.

2. Alternative Project Description

The Land Exchange Alternative is part of the overall Otay Ranch, an approximately 23,000-acre master-planned community in southern San Diego County, partly within the limits of the City of Chula Vista ("City") and partly within the unincorporated County of San Diego. The Otay Sub-Regional Plan is a part of the County General Plan (County of San Diego 2011) and allows for 2,123 homes in Village 14 and Planning Areas 16 and 19.

The Land Exchange Alternative is planned to include approximately 1,530 homes within a development footprint that is limited to the Land Exchange Alternative. The total Alternative Project Area covers approximately 2,347 acres, of which approximately 1,002 acres are within Otay Ranch Village 14 and 1,345 acres are within Planning Areas 16 and 19. The Land Exchange Alternative includes approximately 511.2 acres designated for 1,530 homes, 1,407 of which are single-family homes, including 283 single-family age-restricted and 123 multifamily homes as indicated on Table 1 below. There are 18 neighborhoods planned with approximate densities ranging from 1.5 to 15 dwelling units per acre. The age-restricted neighborhoods will be gated, as will four of the single family neighborhoods situated on the largest lots.

LAND USE ASSUMPTIONS

Residential		
Lot Type	No. of Units	Avg. Home Size (SF)
Single Family	1407	3,000
Multi-Family Homes	123	1,750
Residential Subtotal/Avg.	**1530**	**3,099**

Commercial	
Probable Tenant Type	Bldg. SF (a)
Super Market	1,500
Coffee Shop	1,500
Office	3,500
Quick Serve Food	4,000
Dry Cleaner	1,500
Sandwich Shop	1,500
Nail Salon	1,500
Commercial Subotal	**15,000**

Footnotes:
(a) Estimated square footages based on land use information provided by Developer.

3. FIA Limiting Conditions

The FIA is subject to the following limiting conditions:

- The FIA contains an analysis of recurring revenues and costs to the County from development of the Alternative Project. The FIA is based on estimates, assumptions, and other information developed from DPFG's research, interviews, telephone discussions with County staff, and information from DPFG's database which was collected through fiscal impact analyses previously prepared by DPFG and others.

- The sources of information and basis of the estimates are stated herein. While we believe the sources of information are reliable, DPFG does not express an opinion or any other form of assurance on the accuracy of such information.

- The analysis of recurring revenues and cost impacts to the County contained in the FIA is not considered to be a "financial forecast" or a "financial projection" as technically defined by the American Institute of Certified Public Accountants. The word "projection" as used within this report relates to broad expectations of future events or market conditions.

- Since the analyses contained herein are based on estimates and assumptions which are inherently subject to uncertainty and variation depending on evolving events, DPFG cannot represent that results will definitely be achieved. Some assumptions inevitably will not materialize and unanticipated events and circumstances may occur; therefore, the actual results achieved may vary from the projections.

4. About the County Fire Authority

The San Diego County Fire Authority ("SDCFA") supports the delivery of emergency medical and fire services to a 1.5 million-acre area of unincorporated San Diego County. The emergency services are provided by a combination of professionally trained volunteer and career staff. The San Diego Rural Fire Protection District ("SDRFPD") formerly was the fire authority having jurisdiction. However, following the 2003 and 2007 San Diego County fires, the process to consolidate fire protection services was initiated by SDCFA and after nearly a decade of planning and analysis that produced several reorganization reports between 2007 and 2009, as well as subsequent review by the Local Agency Formation Commission, SDRFPD was legally dissolved and absorbed into Community Service Area (CSA) 135 for structural fire protection and emergency medical response during November 2015. This consolidation was determined by LAFCO, SDCFA, and SDRFPD to provide more efficient fire and emergency medical services in these rural and developing portions of the County. Wildfire protection would continue to be provided by CAL FIRE.

Fire service will be provided by San Diego County Fire Authority (SDCFA) from a centrally located, on-site station that is capable of responding to the Land Exchange Alternative within the County's General Plan 5-minute travel time standard. SDCFA will serve the Alternative Project because it is located within County Service Area (CSA) 135 and the County has indicated it can and will provide fire and emergency medical response. The only other fire agency in the area is Chula Vista Fire Department (CVFD), but the Alternative Project is not within their jurisdictional area and neither of the two closest CVFD fire stations can provide service to any of the proposed structures within the County's General Plan 5-minute travel time standard. As such, a specific assumption of this analysis is that the Alternative Project will include an onsite fire station and fully fund the station's annual operating costs. Based on the Developer's discussions with the Fire District, it is assumed that the fire station will be ultimately staffed with a 4-person crew.

5. General Sources of Information and Methodology Used in FIA

The FIA was prepared to estimate the allocable revenue and cost impacts to the County's general fund ("General Fund") as a result of the Alternative Project's development. The FIA uses a combination of case study methods and multiplier methods to estimate Alternative Project impacts.

When projecting fiscal impacts using a multiplier method, the FIA determines per capita/employee impacts by applying the appropriate multiplier to the Alternative Project's land use assumptions. The Per-Capita-and-Employee-Multiplier Method involves dividing a cost or revenue figure by the number of residents and 50% of all employees working in the County or unincorporated County, and then multiplying that number by the number of residents and 50% of the employees projected for the Alternative Project at buildout. This method assumes that recurring costs and revenues will result from the Alternative Project at the same rates that currently prevail within the County or unincorporated County, with each employee counted as

one-half of a resident to reflect the relative significance of employees (i.e. non-residential land uses) in generating County public services costs or County revenues. County-wide population and employment data are used for those services costs or revenues generated on a County-wide basis (e.g., Health and Human Services), while unincorporated County population and employment data are used for those services costs or revenues generated only within the unincorporated County (e.g., certain Public Safety Group services). The multipliers were calculated using fiscal year 2016-17 budget data from the County of San Diego Adopted Operational Budget for years 2015-2016 and 2016-2017 ("Budget"). All cost and revenue factors are projected in 2016 dollars, and are not adjusted for inflation, based on the assumption that the relative impacts of inflation in future years will be offsetting.

Information used in preparing the FIA was obtained from the following sources: (1) County of San Diego 2016-2017 and 2017-2018 Budget; (2) Jackson Pendo Development Company ("Developer"); (3) Cal Fire (fire station operating cost projections dated March 9,2011); (4) Land Fire Protection Plan prepared by Dudek dated August 2015 (fire station operating cost projections); (5) SANDAG demographics information (persons per household); (6) County of San Diego General Plan Update EIR, August 2011 (employment and sheriff information); (7) Planner's Estimating Guide – projecting Land-Use and Facility Needs, 2004 (employment generation data); (8) San Diego County Auditor-Controller's Office (fiscal year 2014-15 share of the basic tax information); (9) U.S. Department of Labor (household expenditure data); (10) Urban Land Institute (retail sales per square foot data); (11) CBRE (retail and office market information), and other sources as noted; (12) City of Chula Vista Adopted Budget Fiscal Year 2016-2017.

The FIA is organized as follows:

Appendix	Table	Description
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B	3	Land Use and Assessed Value Assumptions
B	4	Estimated Property Values
B	5	Property Tax Revenue
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B	13	Permanent Employment

The following table shows the key population and employment assumptions used in the FIA:

	County	Unincorporated County	Project
Population	3,288,612 (a)	511,119 (a)	5,508 (b)
Employees	1,563,800 (a)	180,036 (c)	41 (d)
Residents + 50% Employees	4,070,512	601,137	5,528

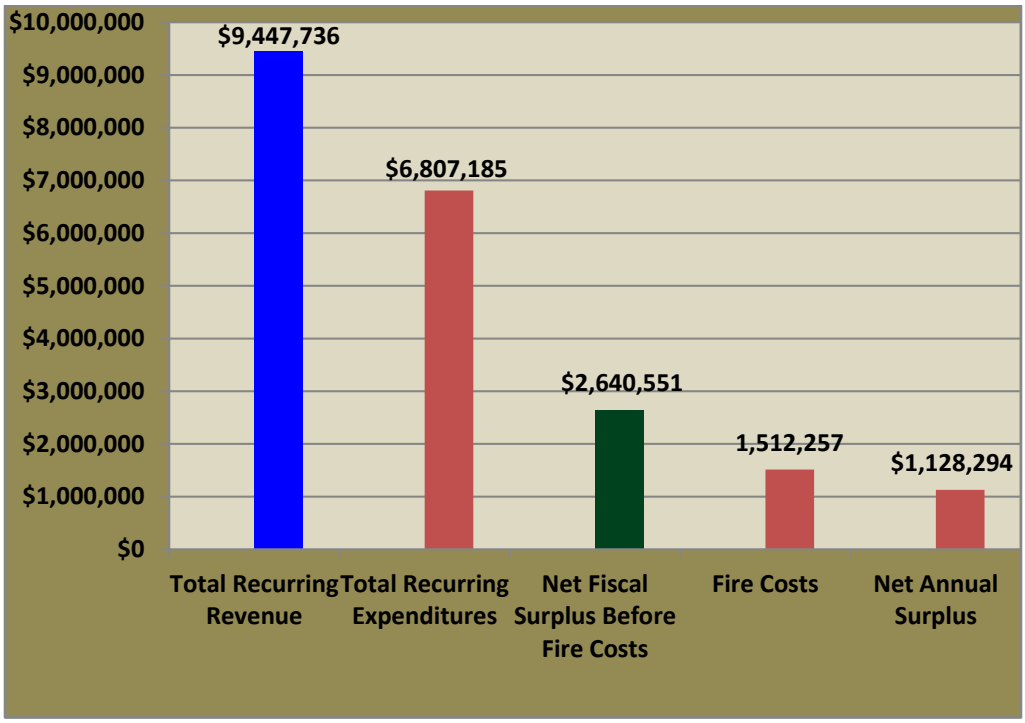
Footnotes:
(a) Per County of San Diego Fiscal Year 2016-2018 Adopted Budget.
(b) Based on 3.6 persons per household Zip Code 91914 and 2.9 persons per household Zip Code 92135 per SANDAG Census Data (Jan, 2010).
(c) Per County of San Diego General Plan Update EIR, August 2011 (Employment by Industry: 2000).
(d) Represents estimated permanent employees per Table 13.

Total Assessed Value from Table 3		$ 1,207,838,674
Base 1% Ad-Valorem Tax	1.00%	$ 12,078,387
County Share of 1% (a):		
County General	15.3426%	$ 1,853,139
County Library	3.0250%	$ 365,371
San Diego County Flood Control District	1.1289%	$ 136,353
San Diego County Fire Authority	1.8989%	$ 229,356
Total Annual Property Taxes to County	**21.3954%**	**$ 2,584,219**

Footnotes:
(a) Per County of San Diego Auditor/Controller.

6. FIA Summary and Conclusions

The FIA examines the financial impact the Alternative Project will have at buildout on the General Fund. The Alternative Project will generate additional revenue for the General Fund primarily through increased property taxes and property taxes in-lieu of vehicle license fees. The additional costs incurred to the General Fund as a result of the Alternative Project are less than the additional revenues generated, and consist primarily of fire, police, and other public safety functions. The Alternative Project's direct impact to the General Fund is summarized as follows:



As seen in the chart above, the Alternative Project is anticipated to generate a net surplus before fire costs of **$2,640,551** and a net surplus of **$1,128,294**, once the Alternative Project is fully developed. The FIA does not consider the impact of potentially reduced General Fund costs due to an Alternative Project Homeowner's Association (e.g., privately maintained parks or streets).

OVERALL SUMMARY

FISCAL IMPACT		
Recurring Revenues:		
Property Tax	$ 2,584,219	Table 5
Property Tax in-lieu of VLF	6,645,660	Table 6
Property Transfer Tax	132,645	Table 7
On-site Sales Tax	25,848	Table 8
Off-site Sales Tax	32,288	Table 9
Other Revenues	27,075	Table 10
Total Recurring Revenue	**$ 9,447,736**	
Recurring Expenditures:		
Public Safety (Excluding Fire)	$ 6,189,230	Table 11
Health & Human Services	95,070	Table 11
Land Use & Environment	73,476	Table 11
Community Services	29,608	Table 11
Finance and General Government	182,942	Table 11
Finance Other	236,860	Table 11
Total Recurring Expenditures	**$ 6,807,185**	
Net Fiscal Surplus Before Fire Costs	**$ 2,640,551**	
Fire Costs	1,512,257	Table 12
Net Fiscal Surplus (Deficit)	**$ 1,128,294**	

Footnotes:

(a) Fire costs represent the operations and maintanence of the fire station, which is part of the regional fire strategy for the SDCFD. Funding for the fire costs will be determined and specified in the Fire Mitigation Agreement.

7. FIA Recurring Revenues

7.1 Property Tax

In addition to other ad valorem charges imposed by various local agencies, land owners in the State of California ("State") are required to pay annual property taxes of 1% on the assessed value of their property pursuant to Proposition 13. Each county in California is divided into tax rate areas ("TRA"). After the basic 1% property tax is collected by the County, the tax is allocated to various local agencies based on each agency's share of the basic tax within the property's applicable TRA. As shown in the table below (reference Appendix B, Table 5), the County receives a 21.3954% share of the basic tax and accordingly, is anticipated to generate $2,584,219 per year in property taxes at buildout.

Total Assessed Value from Table 3		$ 1,207,838,674
Base 1% Ad-Valorem Tax	1.00%	$ 12,078,387
County Share of 1% (a):		
County General	15.3426%	$ 1,853,139
County Library	3.0250%	$ 365,371
San Diego County Flood Control District	1.1289%	$ 136,353
San Diego Fire County Authority	1.8989%	$ 229,356
Total Annual Property Taxes to County	**21.3954%**	**$ 2,584,219**

Footnotes:
(a) Per County of San Diego Auditor/Controller.

7.2 Property Transfer Tax

The County receives property transfer tax revenue as new or existing property is sold and ownership is transferred. In accordance with California Revenue and Taxation Code Section 11911, a county may levy a transfer tax at the rate of $1.10 for each $1,000 of assessed value. The FIA assumes a residential turnover rate of 10.00% of total assessed value per year (i.e. properties change ownership every 10 years on average) and a non-residential turnover rate of 5.00% of total assessed value per year (i.e. properties change ownership every 20 years on average). Using these assumptions, the County is anticipated to receive approximately $132,645 in annual property tax transfer revenue at buildout, as shown in the table below (reference Appendix B, Table 7).

	Residential	Commercial Uses	Total
Total Assessed Value from Table 3	$1,203,893,674	$ 3,945,000	$1,207,838,674
Turnover Rate (a)	10.00%	5.00%	
Annual Taxable Assessed Value	$ 120,389,367	$ 197,250	$ 120,586,617
Property Transfer Tax Rate (b)	0.110000%	0.110000%	0.110000%
Total Annual Property Transfer Taxes	$ 132,428	$ 217	**$ 132,645**

Footnotes:
(a) Based on assumption that residential property will change ownership once every 10 years and commercial property will change ownership once every 20 years.
(b) Represents property transfer tax rate of $1.10 per $1,000 of sale or resale value per Revenue and Taxation Code Section 11911-11929.

7.3 Sales Tax

Under the California Sales and Use Tax Law, the sale of tangible personal property is subject to sales or use tax unless exempt or otherwise excluded. When the sales tax applies, the use tax does not apply and the opposite is also true. The sales tax is imposed on all retailers for the privilege of selling tangible personal property in the State and is measured by the retailer's gross receipts.

Effective January 1, 2013, there is a 7.50% statewide sales and use tax base rate that is collected by the State. The State government receives 6.50% of the 7.50% and local governments receive the remaining 1.00% which is transferred to the local government's general fund.

7.3.1 Onsite Sales Tax

The FIA assumes that the County will receive sales tax revenue from taxable purchases made within the Alternative Project's commercial village center. Using data from *Dollars & Cents of Shopping Centers (2008)* published by the Urban Land Institute, the FIA assumes that the proposed mixed use areas will generate approximately $50 to $405 of taxable sales per building square foot. Applying this methodology, the Alternative Project would generate approximately

$2,584,760 in annual taxable sales at buildout, as shown in the table below (reference Appendix B, Table 8). Assuming the County receives sales tax revenue of 1% of taxable sales, the County would receive approximately $25,848 in annual on-site sales tax revenue at buildout.

Probable Tenant Type	Bldg. SF	Estimated Sales per SF (a)	Estimated % Taxable	Estimated Taxable Sales per SF	Total Estimated Taxable Sales
Super Market	1,500	$ 429	75%	$ 322	$ 482,625
Coffee Shop	1,500	405	100%	405	607,500
Office	3,500	-	0%	-	-
Quick Serve Food	4,000	246	100%	246	985,280
Dry Cleaner	1,500	200	0%	-	-
Sandwich Shop	1,500	290	100%	290	434,355
Nail Salon	1,500	200	25%	50	75,000
Total	**15,000**				**$ 2,584,760**
Annual Sales Tax to County				**1.00%**	**$ 25,848**

Footnotes:
(a) Per Dollars & Cents of Shopping Centers (2008) by Urban Land Institute.

7.3.2 Off-Site Retail Sales Tax

The County will receive sales tax revenue from taxable purchases made within the unincorporated County but outside the Alternative Project area by the Alternative Project's residents. The FIA derives an average household income of $133,000 based on 35% of income being spent on annual housing costs (i.e. principal, interest, taxes, and insurance/maintenance). Then it is assumed that 78.4% of household income is spent on consumer expenditures and 34.1% of such expenditures are taxable, based on data from the U.S. Bureau of Labor Statistics 2012 Consumer Expenditure Survey. Next, of the total taxable spending, it is assumed that 4.2% is captured within the commercial uses of the Alternative Project and 90% is captured by incorporated Cities such as Chula Vista and San Diego, leaving an estimate of 5.8% of taxable spending to estimate off-site retail taxable expenditures captured by the County. After calculating total Alternative Project retail taxable expenditures captured in the County, the FIA assumes the County receives sales tax revenue of 1% of taxable sales. Applying this methodology, the County is anticipated to receive approximately $32,288 in annual off-site sales tax as detailed in the table below (reference Appendix B, Table 9).

Spending by Residents:	Factor	
Aggregate Incomes (from table below)	$152K per Unit	$ 232,560,000
Consumer Expenditures (a)	73.7%	$ 171,290,926
Taxable Spending (a)	32.5%	$ 55,669,551
Less: On-site Capture (b)	4.2%	$ (2,338,121)
Less: Incorporated City Capture (b)	90.0%	$ (50,102,596)
Net Taxable Spending in County		**$ 3,228,834**
Annual Sales Taxes to County	1.0%	**$ 32,288**

Household Income Calculation:		
Avg. Sales Price		$ 786,859
Down Payment	20%	$ 157,372
Loan Amount		$ 629,487
Interest Rate		5.0%
Term (years)		30
Annual Mortgage Payment		$40,551
HOA	$ 200	$ 2,400
Maintenance/Insurance	$ 50	$ 600
Property Taxes	1.2140%	$ 9,552
Total Annual Housing Costs		$ 53,103
% Income spent on Housing		35%
Annual Income Required		$ 151,723
Annual Income Required (rounded)		**$ 152,000**

Footnotes:
(a) Per U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey, 2016-17 for San Diego Metropolitan Statistical Area (MSA).

(b) Capture percentage represents DPFG's estimate based on location relative to other retail establishments in the market area.

7.4 Property Tax In-Lieu of Vehicle License Fees ("VLF")

In May 2004, Governor Schwarzenegger proposed a swap of city and county VLF revenue for additional property tax share as part of a budget agreement between the State and local governments. The swap was included in the 2004 budget package. Under this legislation, property tax in-lieu of VLF is allocated to Cities and Counties pursuant to a complex formula involving each agencies relative share of assessed value. The property tax in-lieu of VLF revenue that will be generated by the Alternative Project can be estimated by determining the (i) percentage growth in the total assessed value of the unincorporated area of the County attributable to the Alternative Project, and multiplying by (ii) the property tax in-lieu of VLF revenue of $372,728,369 expected to be received by the County in FY 2016-18 per the County Budget. Based on these calculations, the Alternative Project is anticipated to generate

$6,645,660 annually in property tax in-lieu of VLF revenue, as shown in the table below (reference Appendix B, Table 6).

FY 2016/17 In Lieu MVLF Allocation to County	$	372,728,369	(a)
2016 County Assessed Value	$	67,214,634,803	(b)
Total Project Assessed Value from Table 3	$	1,207,838,674	
Less: Existing Assessed Value	$	(9,417,336)	(c)
Net (New) Assessed Value	$	1,198,421,338	
AV Growth from Project		1.783%	
Annual County Property Taxes In Lieu of MVLF	**$**	**6,645,660**	

Footnotes:
(a) Per County of San Diego Fiscal Year 2016-18 Approved Budget (pg. 85).
(b) Per County of San Diego Assessor's Office Assessment Roll dated June 2016.
(c) Per FY 2016-2017 Project Tax Bills.

7.5 Other Revenues

The County receives various other revenues analyzed under the FIA. These include (i) franchise, license, and permit revenues, (ii) fees, fines, and forfeitures, (iii) penalties & cost delinquency taxes, and (iv) miscellaneous revenues. These revenues have been estimated using a Per Capita & 50% Employee Multiplier against the County budgeted revenues for each respective revenue category. Based on the total Per Capita & 50% Employee Multiplier of $4.90, total annual "other" revenues are anticipated to be $27,075 at buildout, as seen in Appendix B, Table 10.

8. FIA Recurring Costs

8.1 Public Safety

Public Safety costs include expenses related to the District Attorney, Sheriff, Fire, Probation Department, trial courts, child support services and other services, many of which are provided on a County-wide basis to all County residents. However, certain services such as Fire and Sheriff are only provided to unincorporated areas, except for certain contractual arrangements. For example, as noted in Section 8.1.2 below, the Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach and Vista. Also, the San Diego County Fire Authority has contracts in place with various other agencies. Due to the abbreviated scope of this analysis and the unavailability of detailed breakdowns of certain County Budget data, this analysis does not dissect and stratify the County Public Safety budget and attempt to allocate specific costs to the Alternative Project based on each expense subcategory and associated service area or population except for fire services. Instead, the FIA uses a Per Capita & 50% Employee (Unincorporated) Multiplier against the entire Public Safety general purpose revenue allocation of $706,000,000 less $33,000,000 allocable to the San Diego County Fire Authority for fire services, resulting in a

multiplier of $1,119.55 per person. This methodology is viewed as being conservative in that the service population utilized for spreading costs represents only the unincorporated area, despite the fact that many of the applicable services are provided on a county-wide basis. Based on this multiplier, total annual public safety costs (excluding fire services) are estimated at $6,189,230 at buildout, as seen in Appendix B, Table 11.

8.1.1 Fire Protection

The SDCFA in conjunction with the Department of Forestry and Fire Protection ("CAL FIRE") are anticipated to be responsible for providing fire services to the Alternative Project. As previously noted, for purposes of this FIA we have assumed that the Alternative Project will include an onsite fire station and fully fund the station's annual operating costs. It is assumed that the fire station will be staffed with a 4-person crew. The SDCFA has provided DPFG with an annual estimate for staffing costs and monthly operating expenses. Reserve fund, operating and engineering estimates are based on conversations with the County Fire Authority on November 4, 2015. Based on these estimates, the total annual fire service costs are estimated at $1,512,257 at buildout, as shown in the table below (reference Appendix B, Table 12).

Fire Service Cost - O&M for Fire Station Staffed with 4-Person Crew	
Description of Annual Costs	**Estimated Cost**
Employment of 3 Full-Time Firemen with Full-Time Paramedic (a)	$ 1,403,590
Operations and Maintenance (b)	72,000
Reserve Fund for Replacement of Fire Engine (c)	36,667
Annual Recurring Fire Service Costs	**$ 1,512,257**

Footnotes:

(a) Per Cost estimates provided by San Diego County Fire Authority on November 11, 2015 for staffing costs of Village 14 fire station in addition to monthly operating costs. This estimate includes the employment of 3 full-time firemen with a full time paramedic on staff. In addition to salaries, this estimate includes certain monthly operating costs for the facility and replacement costs for uniforms.

(b) Estimate provided by San Diego County Fire Authority on November 19, 2015. The operations and maintenance account is used to service fire station facilities including landscaping, lighting, structural repairs, and ongoing maintenance on equipment.

(c) Estimated based on 15 year useful life of fire engine at $550,000 per engine [$550,000/15 Years = $36,667 per year] per conversation with San Diego County Fire Authority on November 12, 2015.

8.1.2 Sheriff's Department

The San Diego County Sheriff's Department provides contract law enforcement services for the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista. In these cities the Sheriff's Department serves as their police department, providing a full range of law enforcement services including patrol, traffic and investigative

services. In the unincorporated (non-city) areas, such as where the Alternative Project is located, the Sheriff's Department provides generalized patrol and investigative services. The California Highway Patrol has the primary jurisdiction for traffic services in unincorporated areas. The Sheriff's Department service area covers approximately 4,200 square miles. Sheriff's Department facilities located in unincorporated areas provide general law enforcement patrol, crime investigation, and crime prevention services. To effectively serve this extensive geographic area, the Sheriff's Department Law Enforcement Services Bureau Operations are organized under a system of Command stations, substations, offices and storefronts. A separate rural enforcement area addresses the special needs of outlying areas patrolled by resident deputies. The operational structure is flexible, and areas may be realigned in order to provide better response to citizen calls for service, to ensure a balance of resources, and to be more responsive to community needs.

The Sheriff's Department Law Enforcement Operations Command Areas have further been divided into beat districts which serve the unincorporated County. The Alternative Project is located in the Imperial Beach beat district which is serviced via the Imperial Beach Substation. The Sheriff department is currently planning to be located within the Proposed Alternative Project's Village Core. The cost of sheriff services for the Alternative Project is included in the public safety costs described in Section 8.1 above.

8.2 Health & Human Services

The Health and Human services cost category includes regional operations, aging and independence services, behavioral health services, and child welfare services. Using a Per Capita & 50% Employee Multiplier of $17.20, total annual health and human services costs are anticipated to be $95,070 at buildout, as seen in Appendix B, Table 11.

8.3 Land Use and Environment

The Land Use and Environment Group cost category includes agriculture, weights and measures, environmental health, parks and recreation, planning, land use, and public works costs. Using a Per Capita & 50% Employee Multiplier of $13.29, total annual land use and environmental costs are anticipated to be $73,476 at buildout, as seen in Appendix B, Table 11.

8.4 Community Services

The Community Services Group cost category includes parks, library, roads, animal services, housing and community development, purchasing and contracting, the County Executive Office and Registrar of Voters. Using a Per Capita & 50% Employee Multiplier of $5.63, total annual community services costs are anticipated to be $29.608 at buildout, as seen in Appendix B, Table 11.

8.5 Finance and General Government

The Finance and General Government services cost category includes executive office, assessor/recorder/county clerk, treasurer – tax collector, auditor and controller, county counsel

and human resources costs. Using a Per Capita & 50% Employee Multiplier of $33.09, total finance and general government costs are anticipated to be $182.942 at buildout, as seen in Appendix B, Table 11.

8.6 Finance - Other

Other finance costs include community Alternative Projects, community enhancement, contingency reserve, and countywide general expense costs. Using a Per Capita & 50% Employee Multiplier of $42.84, total other finance costs are anticipated to be $236,860 at buildout, as seen in Appendix B, Table 11.

9. Fiscal Impact to City of Chula Vista (Informational)

For informational purposes, sales tax and gas tax revenue generated for the City of Chula Vista was also analyzed.

It is estimated that the City will receive approximately $343,631 in sales tax per year at Alternative Project buildout (see Appendix B, Table 14). Given the Alternative Project's location at the eastern edge of Otay Ranch and the limited access and limited amount of retail establishments located east of the Alternative Project, it is anticipated that the majority of retail spending by Alternative Project residents will occur within the City. This is supported by a traffic study for the Alternative Project which indicates 82% of daily trips will travel into or through Chula Vista. Additionally, the broad array of retail options available in the City of Chula Vista (e.g., Target, Lowes, Costco, Ralphs, Vons, Trader Joes, and the Otay Regional Mall) make it the most likely destination for core shopping.

We have also estimated the gas tax revenues that Alternative Project residents will generate for the City. The Alternative Project is not anticipated to include a gas service station and the nearest and most accessible gas stations to the Alternative Project will be located in the City. We have used the City Adopted Budget for fiscal year 2016-2017 to determine the per capita annual gas tax per resident within the City. We have conservatively estimated the annual Alternative Project resident's gas tax revenues for the City by using the per capita annual gas tax of $21.13, and adjusting that per capita amount by the Alternative Projected daily trips and assuming that 50% of the trips, would purchase within the City. The total annual gas tax revenues are estimated at $48,295 (see Appendix B, Table15).

The estimated annual sales tax of $328,798 and gas tax of $48,295 , totaling $391,926 to be generated by the Alternative Project residents for the City is anticipated to exceed any cost impacts to the City for services that the Alternative Project residents may receive.

10. Glossary of Defined Terms and Acronyms

Budget	County Adopted Operational Budget for years 2014-2016
City	City of Chula Vista
County	County of San Diego
Developer	Jackson Pendo Development Company
DPFG	Development Planning & Financing Group
ERAF	Educational Revenue Augmentation Fund
FIA	Fiscal Impact Analysis
General Fund	County of San Diego General Fund
Alternative Project	Land Use Exchange Alternative
State	State of California
TRA	Tax Rate Area
VLF	Vehicle License Fees

Appendix A


Solana Beach
Del Mar
Rancho Bernardo
Rancho Penasquitos
Poway
San Vicente Reservoir
Mira Mesa
La Jolla
Lakeside
El Cajon
La Mesa
Rancho San Diego
Lemon Grove
Downtown San Diego
Coronado
National City
Bonita
Chula Vista
Otay Ranch Village 14 & Planning Areas 16/19
Jamul
Sweetwater Reservoir
Otay Ranch SRP Boundary
Upper Otay Reservoir
Otay Ranch Village 13
Lower Otay Reservoir
Otay Ranch
Otay Ranch SRP Boundary
Otay Ranch SRP Boundary
Brown Field
Otay Mesa
Imperial Beach
Pacific Ocean
USA
MEXICO
North
Not to Scale
Land Exchange Alternative

Appendix B

Table 1
Fiscal Impact Analysis Summary
Otay Ranch Village 14 - Land Exchange EIR Alternative

FISCAL IMPACT		
Recurring Revenues:		
Property Tax	$ 2,584,219	Table 5
Property Tax in-lieu of VLF	6,645,660	Table 6
Property Transfer Tax	132,645	Table 7
On-site Sales Tax	25,848	Table 8
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Total Recurring Revenue	**$ 9,447,736**	
Recurring Expenditures:		
Public Safety (Excluding Fire)	$ 6,189,230	Table 11
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Finance and General Government	182,942	Table 11
Finance Other	236,860	Table 11
Total Recurring Expenditures	**$ 6,807,185**	
Net Fiscal Surplus Before Fire Costs	**$ 2,640,551**	
Fire Costs	1,512,257	Table 12
Net Fiscal Surplus (Deficit)	**$ 1,128,294**	

Footnotes:

(a) Fire costs represent the operations and maintanence of the fire station, which is part of the regional fire strategy for the SDCFD. Funding for the fire costs will be determined and specified in the Fire Mitigation Agreement.

Table 2
Population and Employment Data
Otay Ranch Village 14 - Land Exchange EIR Alternative

	County	Unincorporated County	Project
Population	3,288,612 (a)	511,119 (a)	5,508 (b)
Employees	1,563,800 (a)	180,036 (c)	41 (d)
Residents + 50% Employees	4,070,512	601,137	5,528

Footnotes:

(a) Per County of San Diego Fiscal Year 2016-2018 Adopted Budget.

(b) Based on 3.6 persons per household Zip Code 91914 and 2.9 persons per household Zip Code 92135 per SANDAG Census Data (Jan, 2010).

(c) Per County of San Diego General Plan Update EIR, August 2011 (Employment by Industry: 2000).

(d) Represents estimated permanent employees per Table 13.

Table 3
Land Use and Assessed Value Assumptions
Otay Ranch Village 14 - Land Exchange EIR Alternative

Residential				
Lot Size	**No. of Units**	**Avg. Home Size (SF)**	**Projected Avg. Sales Price (a)**	**Total Residential Assessed Value**
R-1	112	3,000	$ 779,834	$ 87,341,408
R-2	72	4,000	971,184	69,925,248
R-3	67	4,150	996,624	66,773,808
R-4	57	3,000	776,746	44,274,522
R-5	109	2,700	727,334	79,279,406
R-6	75	4,000	992,153	74,411,475
R-7	91	3,400	840,796	76,512,436
R-8	47	3,000	776,746	36,507,062
R-9	74	4,300	1,074,973	79,548,002
R-12	44	3,400	843,462	37,112,328
R-13	66	4,300	1,058,952	69,890,832
R-14	60	3,400	843,462	50,607,720
R-15	59	4,500	1,090,752	64,354,368
R-16	191	2,000	598,657	114,343,487
Single Family	1,124	3,429	$ 845,981	$ 950,882,102
Single Family (Age Restricted)	283	2,375	669,059	189,343,697
Single Family subtotal/Avg.	1,407	3,217	$ 810,395	1,140,225,799
Multi-Family Homes	123	1,750	517,625	$ 63,667,875
Residential Subtotal/Avg.	**1,530**	3,099	$ 786,859	**$ 1,203,893,674**

Commercial				
Probable Tenant Type	**Acreage**	**Bldg. SF (a)**	**Estimated Assessed Value per SF (b)**	**Total Commercial Assessed Value**
Super Market	TBD	1,500	$ 263	$ 394,500
Coffee Shop	TBD	1,500	263	394,500
Office	TBD	3,500	263	920,500
Quick Serve Food	TBD	4,000	263	1,052,000
Dry Cleaner	TBD	1,500	263	394,500
Sandwich Shop	TBD	1,500	263	394,500
Nail Salon	TBD	1,500	263	394,500
Retail Center Subtotal		**15,000**	**263**	**$ 3,945,000**
Commercial Subotal		15,000	**263**	**3,945,000**

Residential Assessed Value	$ 1,203,893,674
Commercial Assessed Value	3,945,000
Total Project Assessed Value	**$ 1,207,838,674**

Footnotes:
(a) Source: Developer
(b) Estimated square footages per Developers.
(c) Assessed values per Table 4.

Table 4 - Commercial
Estimated Commercial Uses Property Value using Income Method
Otay Ranch Village 14 - Land Exchange EIR Alternative

		Retail/Shops	
Gross Square Feet		15,000	
Less: Non-leasable Space @ 10%		(1,500)	
Leasable Square Feet		13,500	
REVENUE			
Average Monthly NNN Rental Rate per s.f.		$ 1.82	(a)
Total Scheduled Annual NNN Rents		$ 294,840	
EXPENSES			
Vacancy (%)		4.60%	(a)
Vacancy ($)		$ 13,563	
Unreimbursed Expenses (vacant space)	(c)	$ 5,018	
Total Expenses		$ 18,581	
NET OPERATING INCOME		$ 276,259	
CAP RATE	(d)	7.00%	
TOTAL VALUE		**$ 3,946,560**	
VALUE PER GROSS SQUARE FOOT		$ 263	
VALUE PER GROSS SQUARE FOOT (ROUNDED)		$ 263	

Footnotes:

(a) Based on Average Asking Lease Rate for "South San Diego" market area per CBRE Q1 2015 San Diego Retail MarketView report.

(b) Preliminary estimate by DPFG.

(c) Based on Overall Vacancy percentage for "South San Diego" market area per CBRE Q1 2015 San Diego Retail MarketView report.

(d) Assumes operating expenses at 37% of rental revenue; based on operating cost data per Dollars & Cents of Shopping Center (2008) published by ULI.

(e) Based on CBRE Second Half 2014 Cap Rate Survey for Retail Neighborhood/Community Center (Grocery Anchored) and Suburban Office. Report indicates a range of 6.00% to 6.50% for Class B Retail in San Diego market in "stabilized" condition. This analysis uses the higher end of the ranges to estimate the appropriate cap rate for the subject property.

Table 5
Property Tax Revenue
Otay Ranch Village 14 - Land Exchange EIR Alternative

Total Assessed Value from Table 3		$ 1,207,838,674
Base 1% Ad-Valorem Tax	1.00%	$ 12,078,387
County Share of 1% (a):		
County General	15.3426%	$ 1,853,139
County Library	3.0250%	$ 365,371
San Diego County Flood Control District	1.1289%	$ 136,353
San Diego County Fire Authority	1.8989%	$ 229,356
Total Annual Property Taxes to County	**21.3954%**	**$ 2,584,219**

Footnotes:
(a) Per County of San Diego Auditor/Controller.

Table 6
Property Taxes in Lieu of MVLF
Otay Ranch Village 14 - Land Exchange EIR Alternative

FY 2016/17 In Lieu MVLF Allocation to County	$	372,728,369	(a)
2016 County Assessed Value	$	67,214,634,803	(b)
Total Project Assessed Value from Table 3	$	1,207,838,674	
Less: Existing Assessed Value	$	(9,417,336)	(c)
Net (New) Assessed Value	$	1,198,421,338	
AV Growth from Project		1.783%	
Annual County Property Taxes In Lieu of MVLF	**$**	**6,645,660**	

Footnotes:
(a) Per County of San Diego Fiscal Year 2016-18 Approved Budget (pg. 85).
(b) Per County of San Diego Assessor's Office Assessment Roll dated June 2016.
(c) Per FY 2016-2017 Project Tax Bills.

Table 7
Property Transfer Tax Revenue
Otay Ranch Village 14 - Land Exchange EIR Alternative

	Residential	Commercial Uses	Total
Total Assessed Value from Table 3	$ 1,203,893,674	$ 3,945,000	$ 1,207,838,674
Turnover Rate (a)	10.00%	5.00%	
Annual Taxable Assessed Value	$ 120,389,367	$ 197,250	$ 120,586,617
Property Transfer Tax Rate (b)	0.110000%	0.110000%	0.110000%
Total Annual Property Transfer Taxes	$ 132,428	$ 217	**$ 132,645**

Footnotes:
(a) Based on assumption that residential property will change ownership once every 10 years and commercial property will change ownership once every 20 years.
(b) Represents property transfer tax rate of $1.10 per $1,000 of sale or resale value per Revenue and Taxation Code Section 11911-11929.

Table 8
On-Site Sales Tax Revenue
Otay Ranch Village 14 - Land Exchange EIR Alternative

Probable Tenant Type	Bldg. SF	Estimated Sales per SF (a)	Estimated % Taxable	Estimated Taxable Sales per SF	Total Estimated Taxable Sales
Convenience Store	1,500	$ 429	75%	$ 322	$ 482,625
Coffee Shop	1,500	405	100%	405	607,500
Office	3,500	-	0%	-	-
Quick Serve Food	4,000	246	100%	246	985,280
Dry Cleaner	1,500	200	0%	-	-
Sandwich Shop	1,500	290	100%	290	434,355
Nail Salon	1,500	200	25%	50	75,000
Total	**15,000**				**$ 2,584,760**
Annual Sales Tax to County				**1.00%**	**$ 25,848**

Footnotes:
(a) Per Dollars & Cents of Shopping Centers (2008) by Urban Land Institute.

Table 9
Off-Site Sales Tax Revenue
Otay Ranch Village 14 - Land Exchange EIR Alternative

Spending by Residents:	Factor	
Aggregate Incomes (from table below)	$152K per Unit	$ 232,560,000
Consumer Expenditures (a)	73.7%	$ 171,290,926
Taxable Spending (a)	32.5%	$ 55,669,551
Less: On-site Capture (b)	4.2%	$ (2,338,121)
Less: Incorporated City Capture (b)	90.0%	$ (50,102,596)
Net Taxable Spending in County		**$ 3,228,834**
Annual Sales Taxes to County	1.0%	**$ 32,288**

Household Income Calculation:		
Avg. Sales Price		$ 786,859
Down Payment	20%	$ 157,372
Loan Amount		$ 629,487
Interest Rate		5.0%
Term (years)		30
Annual Mortgage Payment		$40,551
HOA	$ 200	$ 2,400
Maintenance/Insurance	$ 50	$ 600
Property Taxes	1.2140%	$ 9,552
Total Annual Housing Costs		$ 53,103
% Income spent on Housing		35%
Annual Income Required		$ 151,723
Annual Income Required (rounded)		**$ 152,000**

Footnotes:
(a) Per U.S. Department of Labor, Bureau of Labor Statistics Consumer Expenditure Survey, 2016-17 for San Diego Metropolitan Statistical Area (MSA).

(b) Capture percentage represents DPFG's estimate based on location relative to other retail establishments in the market area.

Table 10
Other Recurring Revenues
Otay Ranch Village 14 - Land Exchange EIR Alternative

Revenue Category	County FY 2016-2018 Approved Budget	Multiplier	Factor	Project Equivalent Persons	Project Revenues
Other Revenues:					
Property Tax Prior Secured	400,000	N/A	N/A	-	$ -
Property Tax Prior Secured Supplemental	5,858,218	N/A	N/A	-	-
Property Tax Prior Unsecured	150,000	N/A	N/A	-	-
Property Tax Prior Unsecured Supplemental	400,000	N/A	N/A	-	-
Other Tax Aircraft Unsecured	2,756,225	N/A	N/A	-	-
Transient Occupancy Tax	3,800,000	N/A	N/A	-	-
Real Property Transfer Taxes	20,889,353	Case Study	N/A	-	-
Franchise, License, Permits	5,469,355	Per Capita & 50% Employee	$ 1.34	5,528	7,428
Fees, Fines & Forfeitures	1,554,323	Per Capita & 50% Employee	$ 0.38	5,528	2,111
Penalties & Cost Delinquency Taxes	11,911,952	Per Capita & 50% Employee	$ 2.93	5,528	16,178
Interest on Deposits & Investments	3,721,995	N/A	N/A	-	-
Interfund Charges/Miscellaneous Revenues	1,000,000	Per Capita & 50% Employee	$ 0.25	5,528	1,358
Total	**$ 57,911,421**				**$ 27,075**

Table 11
Recurring Expenditures
Otay Ranch Village 14 - Land Exchange EIR Alternative

Expenditure Category	County FY 2016-2018 Approved Budget (a)	Less: SD County Fire Authority (b)	Adjusted Budget	Multiplier	Factor	Project Equivalent Persons	Project Cost
Public Safety	$ 706,000,000	$ (33,000,000)	$ 673,000,000	Per Capita & 50% Employee-Unincorp.	$ 1,119.55	5,528	$ 6,189,230
Health & Human Services	70,000,000		$ 70,000,000	Per Capita & 50% Employee	17.20	5,528	95,070
Land Use & Environment	54,100,000		$ 54,100,000	Per Capita & 50% Employee	13.29	5,528	73,476
Community Services	21,800,000		$ 21,800,000	Per Capita & 50% Employee	5.36	5,528	29,608
Finance and General Government	134,700,000		$ 134,700,000	Per Capita & 50% Employee	33.09	5,528	182,942
Finance Other	174,400,000		$ 174,400,000	Per Capita & 50% Employee	42.84	5,528	236,860
San Diego Flood Control (c)	5,411,283		$ 5,411,283	Per Capita & 50% Employee	1.33	5,528	7,349
Total	**$ 1,166,411,283**		**$ 1,133,411,283**				**$ 6,814,535**

Footnotes:
(a) Based on general purpose revenue allocations (pg. 108).
(b) Fire costs associated with Project are detailed on Table 12.
(c) For purposes of this analysis, the San Diego Flood Control annual budget was included in Project related County expenditures.

Table 12
Recurring Fire Service Costs
Otay Ranch Village 14 - Land Exchange EIR Alternative

Fire Service Cost - O&M for Fire Station Staffed with 4-Person Crew	
Description of Annual Costs	**Estimated Cost**
Employment of 3 Full-Time Firemen with Full-Time Paramedic (a)	$ 1,403,590
Operations and Maintenance (b)	72,000
Reserve Fund for Replacement of Fire Engine (c)	36,667
Annual Recurring Fire Service Costs	**$ 1,512,257**

Footnotes:

(a) Per Cost estimates provided by San Diego County Fire Authority on November 11, 2015 for staffing costs of Village 14 fire station in addition to monthly operating costs. This estimate includes the employment of 3 full-time firemen with a full time paramedic on staff. In addition to salaries, this estimate includes certain monthly operating costs for the facility and replacement costs for uniforms.

(b) Estimate provided by San Diego County Fire Authority on November 19, 2015. The operations and maintenance account is used to service fire station facilities including landscaping, lighting, structural repairs, and ongoing maintenance on equipment.

(c) Estimated based on 15 year useful life of fire engine at $550,000 per engine [$550,000/15 Years = $36,667 per year] per conversation with San Diego County Fire Authority on November 12, 2015.

Table 13
Permanent Employment
Otay Ranch Village 14 - Land Exchange EIR Alternative

Tenant Type	Bldg. SF	Estimated SF per Employee (a)	Estimated Employees
Retail Center			
Convenience Store	1,500	510	3
Coffee Shop	3,500	510	7
Office	4,000	280	14
Quick Serve Food	1,500	510	3
Dry Cleaner	1,500	280	5
Sandwich Shop	1,500	510	3
Nail Salon	1,500	280	5
Total	**15,000**	**2,880**	**41**

Footnotes:
(a) Per Service and Retail categories per Planner's Estimating Guide - Projecting Land-Use and Facility Needs by Arthur C. Nelson, FAICP (2004) and SANDAG Employee/Sq.Ft. estimates (2008).