

**THE UNIVERSITY VILLAGES  
VILLAGE 3 NORTH & PORTION OF VILLAGE 4 SPA PLAN  
PUBLIC FACILITIES FINANCE PLAN**

**Approved by:  
Chula Vista City Council  
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# I. EXECUTIVE SUMMARY

## OVERVIEW

This Public Facility Finance Plan (PFFP) addresses the public facility needs associated with the Otay Ranch Village 3 North & a Portion of Village 4 Sectional Planning Area (SPA) Plan. The proposed project as described in the SPA Plan is sometimes referred to as “The Project” in this PFFP. The PFFP has been prepared under the requirements of the City of Chula Vista’s Growth Management Program and Chapter 9, Growth Management of the Otay Ranch General Development Plan (GDP). The preparation of the PFFP is required in conjunction with the preparation of the SPA Plan for the project to ensure that the phased development of the project is consistent with the overall goals and policies of the City’s General Plan, Growth Management Program, and the Otay Ranch General Development Plan (GDP) which was adopted by the Chula Vista City Council on October 28, 1993 and recently updated to ensure that the development of the project will not adversely impact the City’s Quality of Life Threshold Standards. This PFFP meets the policies and objectives of the Otay Ranch GDP.

This PFFP is based upon the phasing and project information that has been presented in the *University Villages Sectional Planning Area (SPA) Plan Otay Ranch Village 3 & a Portion of 4* and the *Environmental Impact Report for the Otay Ranch University Villages Project*. The PFFP begins by analyzing the existing demand for facilities based upon the demand from existing development and those projects with various entitlements through the year 2018 (using a starting date of 2014, per the EIR). Further, the PFFP uses the developer proposed phasing to determine the associated impacts.

The SPA Plan area represents a specific geographic area within the overall Otay Ranch planning area of Chula Vista. Planning entitlement documents and technical reports related to the SPA Plan area have been processed along with Otay Ranch Villages 8 East and 10. The Village 3 & a Portion of 4 SPA Plan area public facility review and analysis has been conducted in the context of the surrounding Otay Ranch Villages 8 East and 10. Technical reports utilized in the preparation of and referenced in this PFFP include analysis of Village 8 East and Village 10 as such; some public facility discussion in this PFFP may include discussion of those peripheral villages in proximity to Village 3 North & a Portion of Village 4.

When specific thresholds are projected to be reached or exceeded based upon the analysis of the phased development of the project, the PFFP provides recommended mitigation necessary for continued compliance with the Growth Management Program and Quality of Life Threshold Standards. The development phasing analyzed in this PFFP is consistent with the SPA Phasing Plan, but may indicate that the development phasing should be limited or reduced until certain actions are taken to guarantee public facilities will be available or provided to meet the Quality of Life Threshold Standards. Changes to the phasing shall require approval by the Director of Development Services.

Typically, as an applicant receives each succeeding development approval, the applicant must perform the required steps to ensure the timely provision of the required facility. Failure to perform the required step curtails additional development approvals. The typical steps are illustrated below:

## **Performance of Facility Thresholds**

### **GDP:**

- Goals, objectives & policies established.
- Facility thresholds established.
- Processing requirements established.

### **SPA:**

- Facility financing refined and funding source identified consistent with GDP goals, objectives & policies.
- Facility demand and costs calculated consistent with adopted land uses and GDP defined methodologies.
- Specific facility financing and phasing analysis performed to assure compliance with Growth Management Threshold Standards.
- 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 critical link between the Threshold Standards and development entitlements is the PFFP. Part II, Chapter 9, Section C of the GDP/SPA Processing Requirements, General Development Plan Implementation, requires the preparation of Public Facility Financing and Phasing Plans in conjunction with SPA approval. This PFFP satisfies the GDP requirement. The PFFP requires the preparation and approval of phasing schedules showing how and when facilities and improvements necessary to serve proposed development will be installed or financed to meet the Threshold Standards, including:

- 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 SPA consistency with the Subregional Plan (SRP).

Subsection C of the City of Chula Vista Municipal Code (CVMC) Section 19.09.100 (Growth Management Ordinance) requires that if the City Manager determines that facilities or

improvements within a PFFP are inadequate to accommodate any further development within that area the City Manager shall immediately report the deficiency to the City Council. If the City Council determines that such events or changed circumstances adversely affect the health, safety or welfare of City, the City may require amendment, modification, suspension, or termination of an approved PFFP.

**A. GENERAL CONDITIONS**

1. All development within the boundaries of the PFFP for the project shall conform to the provisions of Section 19.09 of the Chula Vista Municipal Code (Growth Management Ordinance) as may be amended from time to time and to the provisions and conditions of this Public Facilities Financing Plan.
2. All development within the boundaries of the PFFP for the project shall be required to pay development impact fees, unless the developer has entered into a separate agreement with the City, for public facilities, transportation and other applicable fees pursuant to the most recently adopted program by the City Council, and as amended from time to time. Development within the boundaries of the Otay Ranch Village 3 North & a portion of 4 SPA shall also be responsible for fair share proportionate fees that are necessary to meet the adopted facility performance standards as they relate to the SPA Plan and subdivision application.
3. The Public Facilities Finance Plan shall be implemented in accordance with Chula Vista Municipal Code (CVMC) 19.09.090. Future amendments shall be in accordance with CVMC 19.09.100 and shall incorporate newly acquired data, to add conditions and update standards as determined necessary by the City through the required monitoring program. Amendment to this Plan may be initiated by action of the Planning Commission, City Council or property owners at any time. Any such amendments must be approved by the City Council.
4. Approval of this PFFP does not constitute prior environmental review for projects within the boundaries of this Plan. All future projects within the boundaries of this PFFP shall undergo environmental review as determined appropriate by the City of Chula Vista.
5. Approval of this PFFP does not constitute prior discretionary review or approval for projects within the boundaries of the Plan. All future projects within the boundaries of this PFFP shall undergo review in accordance with the Chula Vista Municipal Code. This PFFP analyzes the maximum allowable development potential for planning purposes only. The approval of this plan does not guarantee specific development densities.
6. The facilities and phasing requirements identified in this PFFP are based on the proposed Project Site Utilization Plan (Exhibit 3).
7. The Development Services Director will determine if any future proposed changes to the approved density and/or phasing plan requires reanalysis of public facilities and an amendment to the PFFP.
8. Density Transfer is permitted within the University Villages project pursuant to the Land Offer Agreement between the Applicant and the City of Chula Vista, dated July 8, 2014. The Development Services Director will determine, based upon the scope of the proposed density transfer, whether additional information (i.e. traffic, air quality, global climate change, utilities, etc.) is necessary for Administrative Approval of the density transfer.

## **B. PUBLIC FACILITY COST AND FEE SUMMARY**

The following tables identify and summarize the various facility costs associated with development of the project. The facilities and their costs are identified in detail in subsequent sections of this document. The tables indicate a recommended financing alternative based upon current Chula Vista practices and policies. However, where another financing mechanism may be shown at a later date to be more effective, the City may implement such other mechanisms in accordance with City policies. This will allow the City maximum flexibility in determining the best use of public financing to fund public infrastructure improvements.

The *University Villages TIA, Otay Ranch Village 3 North, 8 East and 10, Revised July 31, 2014 by Chen + Ryan*, has identified onsite and offsite road improvements that will be required as the result of the development of the project. The Village 3 North SPA Project is anticipated to begin construction in 2015. The Village 8 East and Village 10 SPA Projects are anticipated to begin construction and generate traffic in the years 2020 and 2025, respectively. The improvement projects listed for Village 3 North include both offsite and onsite improvements. Most of the transportation improvement projects are eligible for funding through the City's Transportation Development Impact Fee (TDIF) program. In the event the developer constructs a TDIF improvement, the cost of the improvement may be eligible for credit against TDIF fees. Construction of non-TDIF eligible improvements shall be completed by the developer as a project exaction.

Table A.1 summarizes the public facility phasing and associated costs. Transportation Development Impact Fees for the project total approximately \$21,709,662. These fees do not include Traffic Signal Fees, which will be determined at the time building permits are applied for. In addition, these estimated fees do not include any credits the developer may have or may receive through a Development Agreement or through previous construction of TDIF eligible facilities.

Backbone sewer and water improvements will be funded, in part, through the payment of DIF fees and capacity fees established for these purposes. The Developer will fund on-site facilities. The Developer shall also bond for any off-site sewer improvements with the first Final Map for the Project, unless otherwise approved by the City Engineer.

The estimated project sewer fees is approximately \$2,631,666 (does not include the Administration Fee for sewer connection permit). The entire project site is within the Salt Creek Sewerage Basin DIF.

The total costs for the Village 3 North SPA Plan project Capital Improvement Plan (CIP) Potable and Recycled Water Facilities will be determined by the Otay Water District (OWD). According to the OWD policy No. 26, OWD will provide for the construction and design costs associated with the development of these improvements or pursuant to any agreement or provisions in effect at the time.

The project is anticipated to require one elementary school, which may be constructed with funding through a Mello-Roos CFD established by the Chula Vista Elementary School District and as may be memorialized in a School Mitigation Agreement with the district. The project will generate Middle and High School age students. The project

may also participate in a CFD to be established by the Sweetwater Union High School District.

The project will trigger development impact fees for parks of approximately \$25,669,184 and for libraries of approximately \$2,526,454. Police, fire and emergency medical services, recreation, civic center, corporation yard, and other city public facilities will be funded, in part, from revenues generated from the payment of Public Facilities Development Impact Fees (PFDIF) at building permit issuance. These fee revenues total approximately \$13,184,552.

Altogether, the City’s development impact fees by phase and facility for the Project are identified on Table A.1.

<b>Table A.1 Village 3 North &amp; a portion of Village 4 SPA Summary of DIF Fees by Phase &amp; Facility<sup>1</sup></b>						
<b>Facility</b>	<b>Red</b>	<b>Blue</b>	<b>Yellow</b>	<b>Green</b>	<b>Purple</b>	<b>Totals</b>
Traffic <sup>2</sup>	\$6,509,374	\$6,009,614	\$2,858,799	\$6,331,875	\$0	\$21,709,662
Sewer	\$653,526	\$699,201	\$438,967	\$787,703	\$52,269	\$2,611,248
Drainage <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	N/A
Water <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	N/A
Police <sup>6</sup>	\$803,751	\$870,591	\$48,536	\$1,163,200	\$0	\$2,886,077
Fire/EMS <sup>6</sup>	\$670,033	\$725,753	\$20,834	\$637,190	\$0	\$2,053,810
Schools <sup>4</sup>	N/A	N/A	N/A	N/A	N/A	N/A
Library <sup>5</sup>	\$760,942	\$824,222	\$0	\$941,290	\$0	\$2,526,454
Parks <sup>5</sup>	\$8,553,142	\$9,264,422	\$0	\$7,851,620	\$0	\$25,669,184
Recreation <sup>6</sup>	\$577,681	\$625,721	\$0	\$714,595	\$0	\$1,917,997
Civic Center <sup>6</sup>	\$1,325,636	\$1,435,876	\$79,479	\$1,652,300	\$0	\$4,493,291
Corp. Yard <sup>6</sup>	\$216,450	\$234,450	\$102,846	\$300,476	\$0	\$854,221
Other Facilities <sup>6</sup>	\$289,081	\$313,121	\$17,332	\$359,622	\$0	\$979,156
<b>Total</b>	<b>\$20,359,616</b>	<b>\$21,002,971</b>	<b>\$3,566,793</b>	<b>\$20,739,871</b>	<b>\$52,269</b>	<b>\$65,721,520</b>

Footnotes:  
<sup>1</sup> The fees provided in this table are estimates only and subject to change. Fees are based on Form 5509 dated November 7, 2013. Fees are subject to change as the ordinance is amended by the City Council from time to time.  
<sup>2</sup> Includes TDIF & Traffic Signal Fees.  
<sup>3</sup> No city imposed DIF program in place for this facility.  
<sup>4</sup> No city imposed DIF program, however, all properties, including non-residential, are assessed a statutory school fee under state law to mitigate impacts on school facilities caused by residential development.  
<sup>5</sup> Includes both Development and Acquisition fee in lieu. Not applicable to non-residential projects.  
<sup>6</sup> Facilities funded by Public Facilities DIF component.  
 Actual fee obligation calculation to be based on implementing ordinance definition of dwelling unit type irrespective of underlying zoning district containing said dwelling unit.  
 Please reference Exhibit 4, Phasing Plan.

## **II. INTRODUCTION**

### **II.1. Overview**

The City of Chula Vista has thoroughly reviewed the issues dealing with development and the additional impacts it places on public facilities and services. City Council's approval of the Threshold Standards and Growth Management Oversight Committee (Commission) Policy (1997) and the Growth Management Element of the 1989 General Plan were the first steps in the overall process of addressing growth-related issues. The second step in this process was the development and adoption of the City's "Growth Management Program" document (1991) and the Growth Management Ordinance (1991).

The Chula Vista City Council adopted the Growth Management Program on April 23, 1991 (Resolution No. 16101) and the implementing Growth Management ordinance (No. 2448) on May 28, 1991. These documents implement the Growth Management Element of the General Plan, and establish a foundation for carrying out the development policies of the City by directing and coordinating future growth in order to guarantee the timely provision of public facilities and services.

The Growth Management Ordinance requires a Public Facilities Finance Plan (PFFP) to be prepared for future development projects requiring a Sectional Planning Area (SPA) Plan or Tentative Map. The contents of the PFFP are governed by Section 19.09.060 of the Municipal Code, which requires that the plan show how and when the public facilities and services identified in the Growth Management Program will be installed or financed.

### **II.2. Purpose**

The purpose of the Public Facilities Finance Plan is to implement the City's Growth Management Program and to meet the General Plan goals and objectives as well as the Growth Management Element goals and objectives. The Chula Vista Growth Management Program implements the City's General Plan and Zoning Ordinance by ensuring that development occurs only when necessary public facilities and services exist or are provided concurrent with the demands of new development.

### **II.3. Growth Management Threshold Standards**

City Council Resolution No. 13346 identified 11 public facilities and services with related Threshold Standards and implementation measures. These public facilities and services were listed in a policy statement dated November 17, 1987 and have subsequently been refined based on recommendations from the Growth Management Oversight Commission (GMOC).

The 11 public facilities and services include:

- Traffic
- Police
- Fire/EMS
- Schools
- Libraries
- Parks and Recreation
- Water
- Sewer
- Drainage
- Air Quality
- Fiscal

During development of the Growth Management Program Civic Facilities and Corporation Yard were added to the list of facilities to be analyzed in the PFFP:

Threshold Standards are used to identify when new or upgraded public facilities are needed to mitigate the impacts of new development. These Threshold Standards have been prepared to guarantee that public facilities or infrastructure improvements will keep pace with the demands of growth.

In order to be consistent with the Project Environmental Impact Report for the Otay Ranch University Villages Project, August 2014 by Dudek, this PFFP is based on the 2013 GMOC Annual Report. Generally, the findings of the 2014 Annual Report are similar to the 2013 report in that the same four Quality of Life Threshold Standards were found to be out of compliance. These standards include: Fire Response Times; Libraries; Police Priority 2 Response Times; and Traffic (One Arterial Segment: Heritage Road between Olympic Parkway and Telegraph Canyon continues to be non-compliant).

#### **II.4. Project Background**

The Otay Ranch General Development Plan / Sub Regional Area Plan (GDP/SRP) was originally adopted by the Chula Vista City Council and the San Diego County Board of Supervisors on October 28, 1993. The plan governs the 23,000+ acre Otay Ranch properties. The Otay Ranch GDP is based upon, and directly implements the City of Chula Vista General Plan. The Otay Ranch GDP includes plans for urban villages, a resort community, the Eastern Urban Center, industrial areas, rural estate planning areas, an 11,375+ acre open space preserve and a university. The Otay Ranch open space system, facilitates completion of the Chula Vista Greenbelt System and the Chula Vista Multi-Species Habitat Conservation Plan (MSCP) Subarea Plan. The Village 3 & a portion of Village 4 project area is located in the western portion of the Otay Ranch GDP (See Exhibits 1 & 2).

The Village 3 North portion of the SPA Plan Area was included within the planning boundaries of Village 3 and the Villages 2, 3, and a portion of Village 4 SPA Plan approved by the Chula Vista City Council in 2006. Proposed amendments to the 2006 SPA Plan will exclude the Village 3 North area from the boundary. This SPA Plan includes a portion of Village 3 North. The balance of Village 3 (Village 3 South) remains in the Villages 2, 3 and a portion of Village 4 SPA Plan, is not a part of the Village 3 North SPA Plan area and is under separate ownership.

In 2005, the Chula Vista City Council adopted an update to the Chula Vista General Plan. In addition, the Chula Vista Council entered into a Land Offer Agreement (LOA) with the Applicant in 2008. The LOA was subsequently amended in 2010 and again in 2014. The LOA established a framework for planning the southern portion of the Otay Valley Parcel, including the creation of a future University and Regional Technology Park. The Village 3 North & a portion of 4 SPA Plan implements the LOA by designating land uses consistent with the LOA; however, amendments to the Chula Vista General Plan and Otay Ranch GDP are proposed as part of this project.

The Village 3 North & a portion of Village 4 consists of approximately 436 acres. The land is comprised of large, flat mesas, with slopes adjacent to Wolf Canyon and the Otay River Valley. Village 3 North is situated between Wolf Canyon to the east, the Otay River Valley and Otay Valley Regional Park to the south, the Otay Landfill to the north, and existing industrial uses to the west. The Portion of Village 4 included in the proposed project is located on the northeastern edge of Wolf Canyon, north of the Otay River Valley and the Otay Valley rock quarry, south of Village 2, and west of La Media Road and the future

Village 8 West development area. The Village 3 North project proposed land uses are illustrated in Table A.2.

<b>Table A.2 Village 3 North Land Use Summary</b>				
<b>Land Use</b>	<b>Gross Acres</b>	<b>Commercial Square Footage</b>	<b>Residential Dwelling Units</b>	<b>Population<sup>a</sup></b>
Single-Family Residential	115.2		1,002	3,247
Multi-Family Residential	10.8		515	1,667
Mixed-Use	8.2	20,000	80	259
Industrial	28.6			
Office	5.2			
Parks	25.7			
School	8.3			
Community-Purpose Facilities	4.2			
Private Open Space	2.4			
Open Space	35.4			
Preserve <sup>b</sup>	158.1 <sup>b</sup>			
Circulation	33.9			
<b>Subtotal</b>	<b>436</b>	<b>20,000</b>	<b>1,597</b>	<b>5,174</b>
<b>Notes:</b>				
<sup>a</sup> Population estimates based on 3.24 persons per residential dwelling unit.				
<sup>b</sup> Does not include 2.9 acres of circulation that is within the Preserve. Those 2.9 acres are accounted for in the “Preserve” category.				

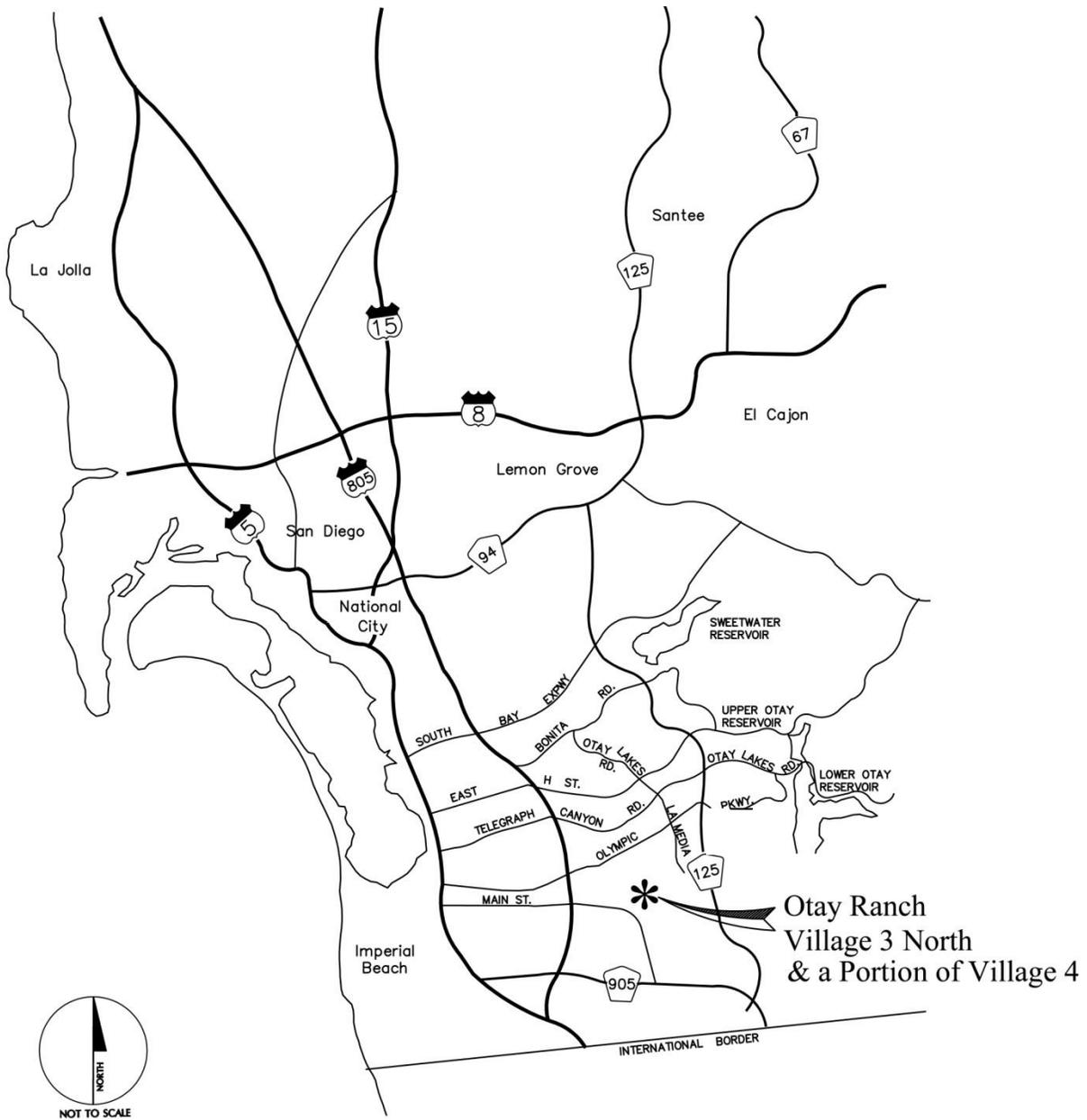
*Source: Project EIR*

## **II.5. Public Facilities Finance Plan Boundaries**

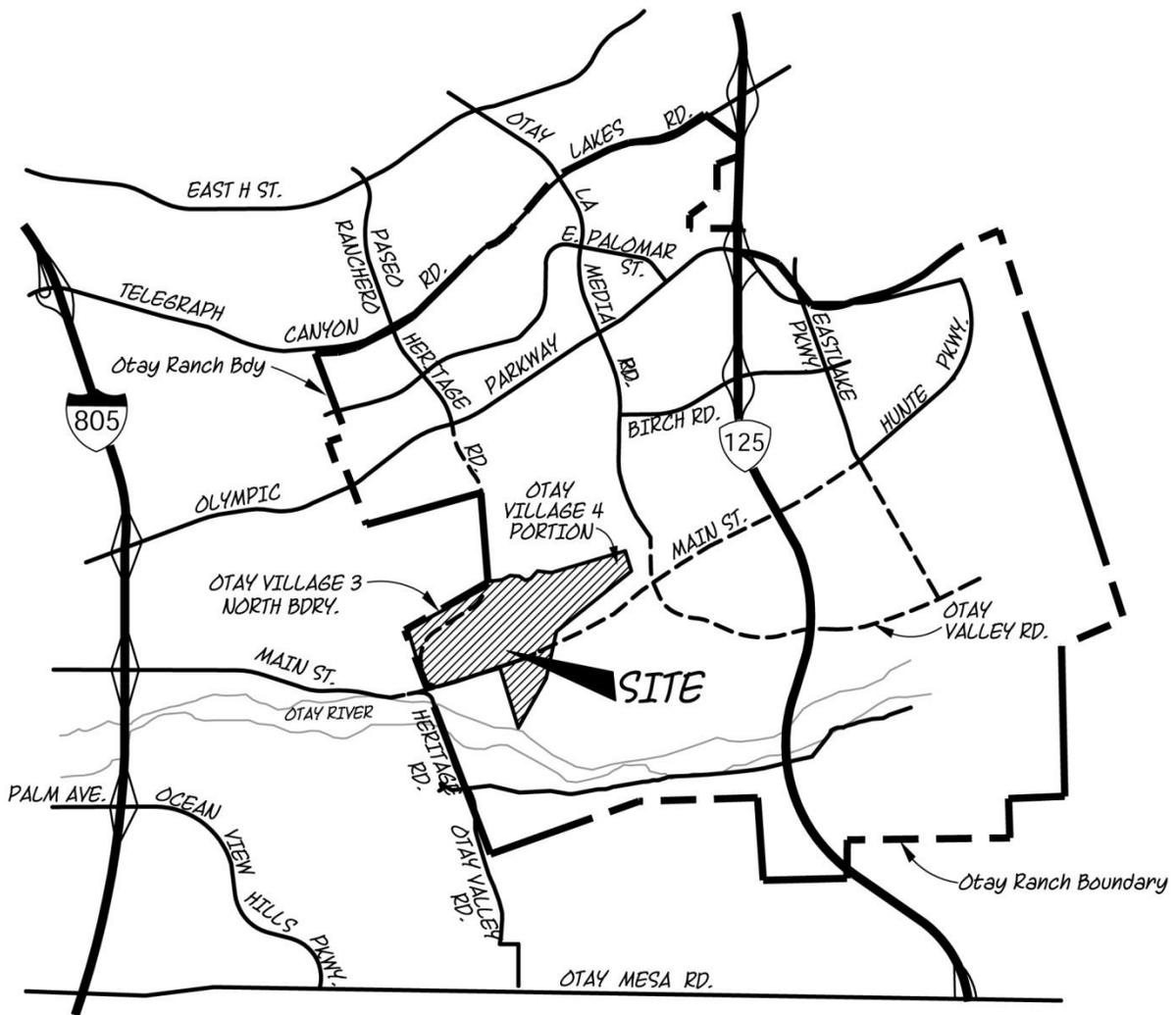
Section 19.12.070 of the Municipal Code requires that the City establish the boundaries of the PFFP at the time a SPA Plan or Tentative Map(s) is submitted by the applicant. The boundaries shall be based upon the impact created by the Project on the existing and future need for facilities. The project boundaries will correlate the proposed development project with existing and future development proposed for the area of impact to provide for the economically efficient and timely installation of both onsite and offsite facilities and improvements required by the development. In establishing the boundaries for the PFFP, the City shall be guided by the following considerations:

- A. Service areas, drainage, sewer basins, and pressure zones that serve the Project;
- B. Extent to which facilities or improvements are in place or available;
- C. Ownership of property;
- D. Project impact on public facilities relationships, especially the impact on the City’s planned major circulation network;
- E. Special district service territories;
- F. Approved fire, drainage, sewer, or other facilities or improvement master plans.

The boundaries of the PFFP for the project are congruent with the SPA Plan boundaries. Also, the PFFP addresses certain facilities (streets, drainage, sewer, police, fire, etc.) that are impacted beyond the boundaries of the SPA Plan.



## Exhibit 1 Regional Location Map



## Exhibit 2 Vicinity Map

## **II.6. Land Use Assumptions**

### **II.6.1. Purpose**

The purpose of this section is to quantify how the Otay Ranch Villages 2, 3, and a portion of the Village 4 SPA project will be analyzed in relationship to all other projects which are at various stages in the City's development process. The Growth Management Program addressed the issue of development phasing in relationship to location, timing, and fiscal/economic considerations.

Based upon the overall elements to be considered when projecting the phasing of development and policies contained in the Growth Management Program, the City was able to forecast where and when development will take place and produced a 5-year Development Phasing Forecast. Subsequent to the approval of the Growth Management Program, the forecasted development phasing has been updated periodically as facility improvements are made and the capacity for new development becomes available. The current update is summarized on Table B.1.

The specific factors, which affect the development-phasing forecast, include the status of development approvals and binding development agreements, and the completion of the construction of State Route 125. These components were reviewed as part of this PFFP in conjunction with the requirement to provide facilities and services concurrent with the demand created by the project to maintain compliance with the Threshold Standards.

The management of future growth includes increased coordination of activities of the various City departments as well as with both the Sweetwater Union High School District and the Chula Vista Elementary School District and the Otay Water District that serve the City of Chula Vista. The forecast is a component of the City of Chula Vista's Growth Management Program. The Development Services Department provides annual growth forecasts for two time frames: 18 months and a 5-year period. This information enables City departments and the other aforementioned service agencies to assess the probable impacts that growth may have on maintaining compliance with the City's facilities and service Threshold Standards. In addition, with this data City departments and the other service agencies will be able to report potential impacts to the GMOC.

### **II.6.2. Existing Development**

As a starting point, the PFFP considers all existing development up to January 2013 as the base condition. The starting point was chosen to be consistent with the *University Villages Project Environmental Impact Report, June 2014, Dudek*. The statistical information is based upon City of Chula Vista Development Services Department growth management monitoring data. According to this and other data, the population of the City as of January 2013 is estimated at 251,613 (2013 Annual Residential Growth Forecast). This estimate is based on city estimates of growth for 2013 and combined with data from the California Department of Finance (DOF).

For the purposes of projecting facility demands for the Otay Ranch Village 3 North & portion of 4 SPA the City of Chula Vista utilizes a population coefficient of 3.24 persons per dwelling unit. This factor is used throughout this PFFP to calculate facility demands from approved projects. The coefficient has been confirmed for use in the PFFP by the

Development Services Department. The same coefficient will be used for calculating the specific project facility demands.

### II.6.3. Chula Vista Development Phasing Forecast

A summary of the 2013 growth forecast is shown in Table B.1. The table presents an estimate of the amount of development activity anticipated to the year 2018. The total number of dwelling units permitted by the year 2018 is approximately 8,757 dwelling units. It should be noted that these projections are estimates and should be used for analytical purposes only and unless a development agreement or other legal instrument guarantees facility capacity, some projects with varying levels of entitlement may not have committed capacity.

PROJECT	Five Years Forecast											
	SEPTEMBER 2013 - DECEMBER 2014		JAN. - DECEMBER 2015		JAN. - DECEMBER 2016		JAN. - DECEMBER 2017		JAN. - DECEMBER 2018		SEPTEMBER 2013 - 2018	
	ISSUE*		ISSUE*		ISSUE*		ISSUE*		ISSUE*		ISSUE*	
	SF	MF	SF	MF	SF	MF	SF	MF	SF	MF	SF	MF
<b>OTAY RANCH</b>												
Village 2 North - Baldwin & Sons	159	114	61	107	72	69	13	9	0	0	305	299
Village 2 East - Baldwin & Sons	0	372	0	300	0	0	0	0	0	0	0	672
Village 2 South - Baldwin & Sons	28	0	97	0	178	177	112	120	0	120	415	417
Village 2 West - Baldwin & Sons	0	0	0	0	27	0	0	40	0	40	27	80
Village 2 - JPB (Anacapa II R-9)	22	0	9	0	0	0	0	0	0	0	31	0
Village 2 - JPB (Presidio II R-7)	32	0	35	0	0	0	0	0	0	0	67	0
Village 2 - JPB (R-28)	0	0	0	96	0	0	0	0	0	0	0	96
Village 3 North - JPB	0	0	130	125	300	250	300	250	272	250	1002	875
Village 6 - Oakwood (Contessa)	0	108	0	0	0	0	0	0	0	0	0	108
Village 7 - Baldwin & Sons	1	0	0	0	0	0	0	0	0	0	1	0
Village 7 - JPB (Monte Sereno)	16	0	8	0	0	0	0	0	0	0	24	0
Village 7 - McMillin (Mosaic)	0	34	0	11	0	0	0	0	0	0	0	45
Village 8 East - JPB	0	0	0	0	130	125	300	250	300	250	730	625
Village 8 West - Otay Land Co.	0	0	60	118	59	153	60	141	100	140	279	552
Village 9 - Otay Land Co.	0	10	0	0	0	0	73	174	102	263	175	437
Freeway Commercial - Baldwin & Sons	0	0	0	448	0	0	0	0	0	0	0	448
Eastern Urban Center - McMillin (Millenia)	0	310	0	87	0	354	0	18	0	0	0	769
<b>Otay Ranch Sub-Total</b>	<b>258</b>	<b>938</b>	<b>400</b>	<b>1,292</b>	<b>766</b>	<b>1,128</b>	<b>858</b>	<b>1,002</b>	<b>774</b>	<b>1,063</b>	<b>3056</b>	<b>5423</b>
Eastlake Vistas - Lennar Homes (Lake Pointe)	136	85	0	0	0	0	0	0	0	0	136	85
Bella Lago - Shea	18	0	0	0	0	0	0	0	0	0	18	0
Bella Lago - Bella Lago LLC	0	0	0	0	8	0	8	0	8	0	24	0
Rolling Hills Ranch - McMillin (Verona)	15	0	0	0	0	0	0	0	0	0	15	0
<b>SUB-TOTAL</b>	<b>427</b>	<b>1,023</b>	<b>400</b>	<b>1,292</b>	<b>774</b>	<b>1,128</b>	<b>866</b>	<b>1,002</b>	<b>782</b>	<b>1,063</b>	<b>3249</b>	<b>5508</b>
<b>TOTAL UNITS</b>	<b>1,450</b>		<b>1,692</b>		<b>1,902</b>		<b>1,868</b>		<b>1,845</b>		<b>8,757</b>	
	<b>Annual Average:</b>											
	<b>1,751</b>											

\*ISSUE = Building Permit

Source: City of Chula Vista Annual Residential Growth Forecast Years 2013 through 2018, Sept. 2013.

In order to be consistent with the Otay Ranch University Villages Project Draft Environmental Impact Report, this PFFP is based on the 2013 GMOC Annual Report. Generally, the findings of the 2014 Annual Report are similar to the 2013 report in that the same four Quality of Life Threshold Standards were found to be out of compliance. These standards include: Fire Response Times; Libraries; Police Priority Two Response Times; and Traffic (One Arterial Segment: Heritage Road between Olympic Parkway and Telegraph Canyon continues to non-compliant).

#### **II.6.4. Village 3 North & a portion of Village 4 Development Summary**

The proposed land uses for the Village 3 North Site Utilization Plan are shown on Exhibit 3, creates a pedestrian-oriented urban village containing 1,597 homes. Village 3 North contains a mixed-use village core with approximately 20,000 square feet of commercial/retail uses surrounded by multi-family attached and detached neighborhoods. A total of 1,002 single-family, 515 multi-family and 80 mixed use dwelling units are provided in Village 3 North, for a total projected population of 5,174 persons. Village 3 North also includes an elementary school and neighborhood park site. Small recreation sites (Private Open Space (P-OS) and Community-Purpose Facility (CPF) sites are provided throughout the project. Approximately 28.6 acres immediately south of the Otay Landfill remain Light Industrial. Just east of Heritage Road are 5.2 acres of Office uses, and an 8.2-acre Mixed-Use Office/Commercial site is just south of Heritage Road, providing job-producing land uses near the Village 3 North neighborhoods.

The proposed mix of residential land use designations for Village 3 North includes Residential Low–Medium Village (LMV), Medium (M), Mixed-Use Commercial (MUC) and Mixed-Use (MU). Non-residential land use designations include Parks and Recreation (P), Open Space (OS), Private Open Space (P-OS), Open Space Preserve (OS/P), Office (O), and Light Industrial (LI).

The Portion of Village 4 included in the project includes 29.7 acres, of which 15.6 acres (net) are designated Community Park (P-2), 8.6 acres remain designated OS, and 3.3 acres previously identified as OS are designated OS/P. Overall, Village 3 North and a portion of Village 4 include approximately 158.1 acres designated OS/P.

Regional access to Village 3 North and a portion of Village 4 is provided by State Route 125 (SR-125), which is located approximately 2.5 miles to the east, and also via I-805, located approximately 1.75 miles to the west. Additional north–south access is available from Interstate 5 (I-5), approximately 6 miles west of Village 3 North and a Portion of Village 4. SR-54 and SR-905 (approximately 6.5 miles north and 3 miles south, respectively, of Village 3 North provide regional east–west.

The Otay Ranch GDP provides for the expansion of the regional transit-way system into Otay Ranch. A transit stop/station is planned within the mixed-use village core area of Village 3 North. A transit stop/station is also proposed to be located at the intersection of Main Street and Heritage Road. Circulation within the villages also includes an extensive network of planned bicycle routes and pedestrian trails.

##### ***Parks, Recreation, and Open Space***

The Village 3 North and Portion of Village 4 Parks, Recreation, and Open Space Plan is shown on Exhibit 7. The amenities include a community park (P-2), neighborhood park (P-1), pedestrian and bicycle facilities, private recreation sites (CPF) and Private Open Space (P-OS).

##### ***Community Park (P-2)***

The Portion of Village 4 includes a 15.6-acre (net) community park in the planned 70-acre Village 4 Community Park site. Recreational facilities in community parks (P-2) include lighted ball fields and courts, recreation complexes (buildings and swimming pools), security lighting, parking, and areas for children’s play, informal play, and picnicking. Park amenities will be in conformance with the City of Chula Vista Parks Master Plan.

***Neighborhood Park (P-1)***

This park is approximately 6.7-acres (net) in size and is located in the village core of Village 3 North. The park is within walking distance of the most densely populated portion of the village and adjacent to the elementary school to provide opportunities for shared facilities and programs. Amenities may include multipurpose open lawn areas, ball fields, lighted sports courts, picnic shelters, tot lots, parking, and restroom and maintenance buildings.

***Pedestrian and Bicycle Facilities***

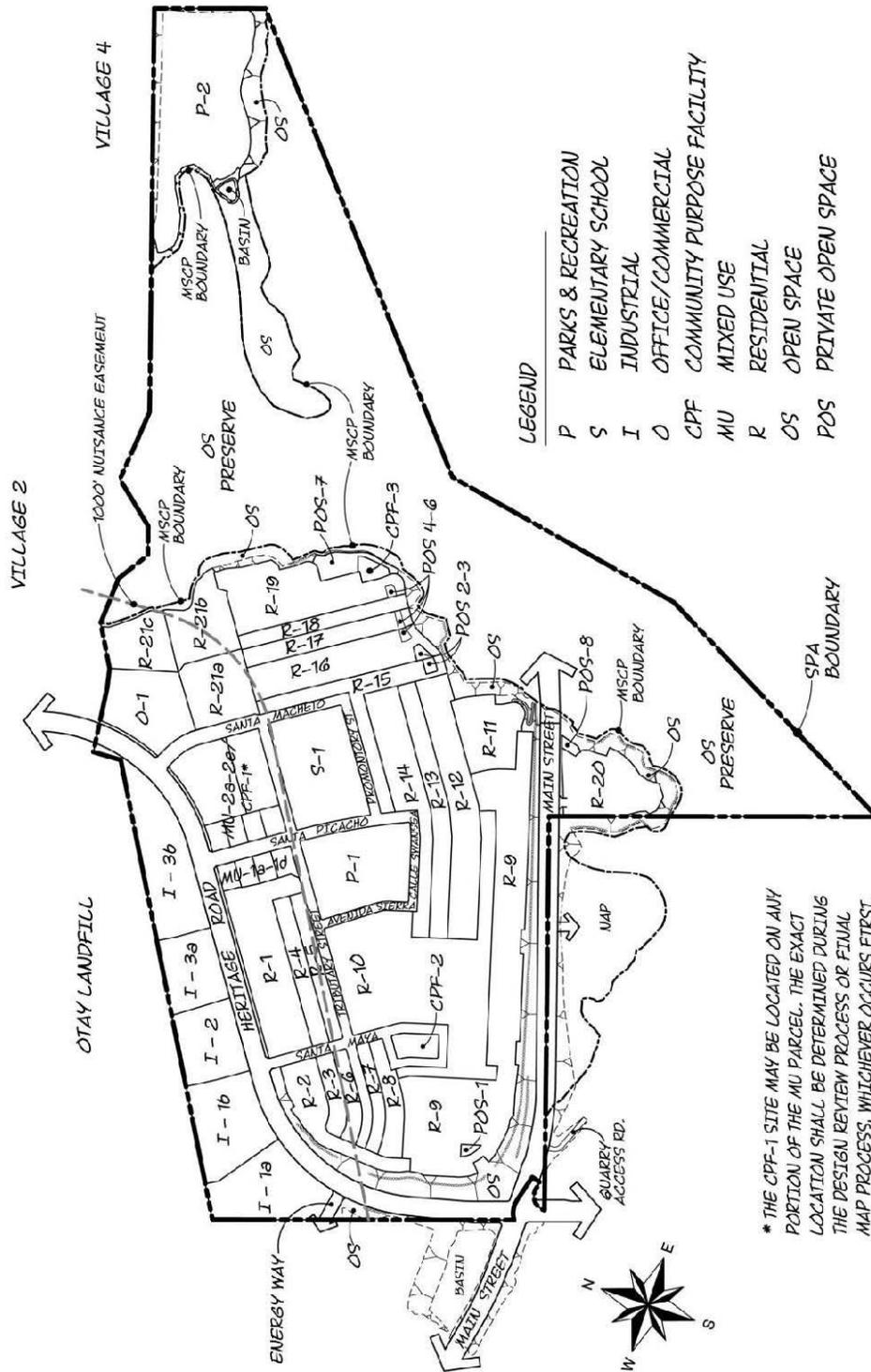
Village 3 North is designed to accommodate the trails program described in the Otay Ranch Overall Design Plan, the City's Greenbelt Master Plan, and the Otay Valley Regional Park (OVRP) Concept Plan. Regional Trails located adjacent to roadways provide alternative circulation routes for pedestrians and bicycles separate from roadways. Village Pathways are multipurpose paths that link all of the Otay Valley Parcel villages and provide access to the regional transit-way stations.

***Community-Purpose Facilities***

Sites designated CPF are located throughout Village 3 North and total approximately 1.6 acres. Smaller private recreation facilities (CPF's) are distributed throughout the village to provide recreation opportunities within walking distances of homes. Amenities in these private recreation facilities may include open lawn areas, ball fields and sports courts, tot lots/play areas, picnic areas, swimming pools, and meeting rooms.

***Private Open Space***

P-OS areas totaling approximately 2.4 acres are located in Village 3 North. These areas are intended to serve residents within single-family neighborhoods. Facilities may include open lawn areas, ball fields and sports courts, tot lots/play areas, picnic areas, and swimming pools.



Source: Otay Ranch Village 3 North SPA Plan July 25, 2014

### Exhibit 3 Village 3 North & portion of Village 4 Site Utilization Plan

**Table B.2**  
**Village 3 North & portion of Village 4 Site Utilization Table**

<i>Land Use Summary Neighborhood</i>	<i>Unit Type</i>	<i>Acres</i>	<i>Units</i>	<i>Target Density</i>		<i>Land Use Summary</i>		<i>Acres</i>	<i>Units</i>
<b>Single Family</b>						<b>Other</b>			
R-1	SF	8.2	74	9.3		<b>Community Purpose Facilities</b>			
R-2	SF	3.8	34	9.2		CPF-1		2.6	
R-3	SF	1.4	14	10.0		CPF-2 <sup>4</sup>		1.1	
R-4	SF	2.6	25	9.6		CPF-3		0.5	
R-5	SF	2.1	25	11.9		<b>CPF Total</b>		<b>4.2</b>	
R-6	SF	1.4	16	11.4		<b>Private Open Space</b>			
R-7	SF	1.4	19	13.6				<b>2.4</b>	
R-8	SF	2.2	21	9.5		<b>Parks</b>			
R-9	SF	20.6	149	7.3		P-1		7.9	
R-10	SF	19.4	170	8.8		P-2 (V4)		17.8	
R-11	SF	4.2	27	6.4		<b>Parks Total</b>		<b>25.7</b>	
R-12	SF	7.7	70	9.1		<b>School</b>			
R-13	SF	4.7	46	9.8		S-1		8.3	
R-14	SF	6.0	67	11.2		<b>School Total</b>		<b>8.3</b>	
R-15	SF	4.7	51	10.9		<b>Office / Commercial</b>			
R-16	SF	5.9	54	9.2		O-1		5.2	
R-17	SF	3.0	26	8.7		<b>Office/Commercial Total</b>		<b>5.2</b>	
R-18	SF	2.5	19	7.6		<b>Open Space Total</b>			
R-19	SF	7.9	51	6.5				<b>35.4</b>	
R-20	SF	5.5	44	8.0		<b>Industrial</b>			
<b>Single Family Total</b>		<b>115.2</b>	<b>1,002</b>	<b>8.7</b>		I-1a		6.4	
<b>Multi Family Res.</b>						I-1b		6.1	
R-21a	MF	3.6	190	42.2		I-2		4.4	
R-21b	MF	3.9	170	40.5		I-3a		4.2	
R-21c	MF	3.3	155	43.1		I-3b		7.5	
<b>Multi Family Total</b>		<b>10.8</b>	<b>515</b>	<b>41.9</b>		<b>Industrial Total</b>		<b>28.6</b>	
<b>Mixed Use<sup>1</sup></b>						<b>Preserve Total</b>		<b>158.1</b>	
MU-1a-d <sup>2</sup>	MU	2.1	80	38.1		<b>Circulation</b>			
MU-2a-f <sup>3</sup>	MU	6.1	0	0.0		<i>Internal Circulation</i>		17.0	
<b>Mixed Use Total</b>		<b>8.2</b>	<b>80</b>	<b>9.9</b>		<i>External Circulation</i>		16.9	
<b>Residential Total</b>						<b>Circulation Total</b>		<b>33.9</b>	
		<b>134.2</b>	<b>1,597</b>	<b>11.8</b>					
<sup>1</sup> MU-2a-f Lot acreage excludes 2.6 ac CPF-1 Lot. <sup>1</sup> Minimum 20,000 sf commercial on MU 1 Site. <sup>2</sup> The CPF site may be developed within the MU2 site or the O1 site <i>Note: MU-1 shall be comprised of a mix of multi-family residential above/behind retail/commercial uses.</i> <sup>3</sup> MU-2 shall be comprised of 80% office uses and 20% commercial/retail uses. <sup>4</sup> 0.2 acres of the CPF-2 site may be used to satisfy all or a portion of the Common Useable Open Space requirement for neighborhoods within ¼ mile of the CPF-2 site.						<b>TOTAL</b>			
		<b>436.0</b>	<b>1,597</b>						

Source: Otay Ranch Village 3 North SPA Plan, July 25, 2014

**II.6.5. Phasing:**

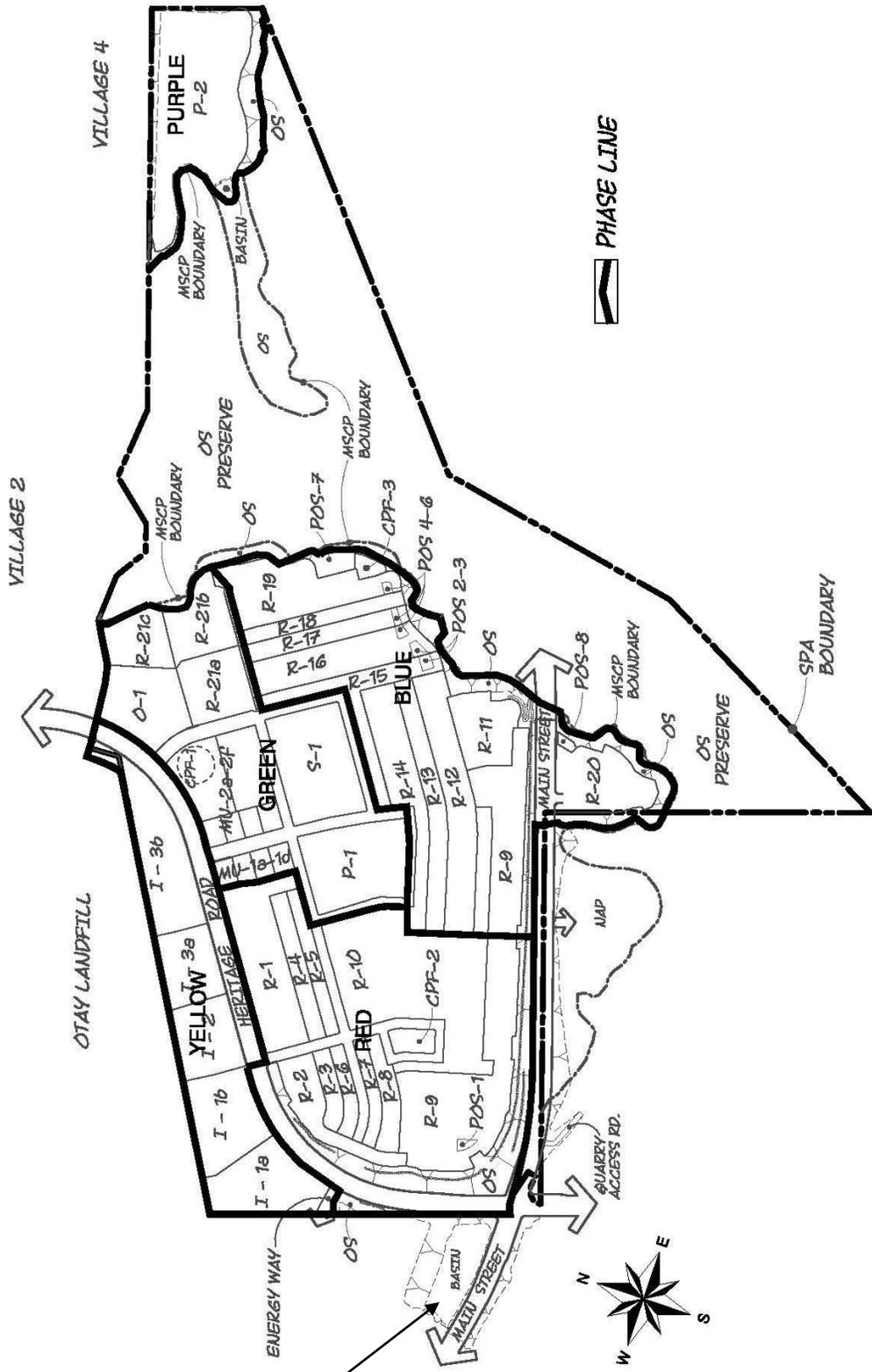
**B. Density Transfer**

Development of the SPA Plan area will be completed in phases to ensure construction of necessary infrastructure and amenities for each phase as the project progresses. The Conceptual Phasing Table (Table B.4) and the Conceptual Phasing Plan (Exhibit 4) reflect anticipated market demand for a variety of housing types, commercial and business park development.

The Phasing Plan is non-sequential because sequential phasing is frequently inaccurate due to unforeseen market changes or regulatory constraints. Therefore, the SPA Plan and this PFFP permits non-sequential phasing by imposing specific facilities requirements for each phase to ensure the SPA Plan areas are adequately served and City Threshold Standards are met. Public parks and schools shall be phased as needed. The Phasing Plan is consistent with the SPA Plan Public Facilities Finance Plan (PFFP). The proposed phasing and actual construction timing of the SPA Plan area may be modified subject to compliance with provisions of this PFFP. Table B.3 provides a summary of the triggers that require public services and facilities.

<b>Table B.3 Otay Ranch Village 3 North &amp; a portion of Village 4 SPA Phasing Plan Summary</b>			
<b>Facility</b>	<b>Facility Description</b>	<b>Triggers</b>	<b>Financing Method</b>
<b>Streets</b>	As presented in the <i>University Villages TIA, Otay Ranch Village 3 North, 8 East and 10, Revised July 31, 2014 by Chen + Ryan</i>	By Phasing & EDU's See Tables C.8 & C.9 in Traffic Section	TDIF <sup>1</sup> or Exaction
<b>Potable Water</b>	Zone 624 and 711 Improvements per OWD	Concurrent w/ Phasing	OWD CIP Fees
<b>Recycled Water</b>	Zone 680 Improvements per OWD	Concurrent w/ Phasing	OWD CIP Fees
<b>Sewer</b>	Connection to existing sewer system	Concurrent w/ Phasing	Fee Program
	Sewer Improvements per city	Concurrent w/ Phasing	Exaction
	Pay Fees	Concurrent w/ Building Permit	Fee Program
<b>Storm Drain</b>	Connect to Existing Drainage System	Concurrent w/ Grading Permit	Fee Program
<b>Schools</b>	No specific facility subject to fees	Pay School Fees	State Mandated Fees
<b>Parks</b>	Park Dedication & Construction	Concurrent with Phasing	Credit/PAD Fees
<b>Recreation</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Library</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Fire &amp; EMS</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Police</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Civic</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Corp Yard</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program
<b>Other</b>	Pay PFDIF Fee	Pay @ Bldg Permit	Fee Program

<sup>1</sup> TDIF Streets will be constructed by Developer (receiving TDIF credits). Non TDIF Streets are developer exaction.



The off-site water quality basin must be constructed with the first phase of Village 3 North

Source: Otay Ranch Village 3 North SPA Plan, July 25, 2014

## Exhibit 4 Conceptual Phasing Plan

**Table B.4  
Village 3 North and a Portion of 4 Conceptual Phasing**

		Red		Blue		Yellow		Green		Purple		ac*	du
	Land Use	ac	du	ac	du	ac	du	ac	du	ac	du	Total	Total
<b>RESIDENTIAL</b>													
R-1	SF	8.2	74									8.2	74
R-2	SF	3.8	34									3.8	34
R-3	SF	1.4	14									1.4	14
R-4	SF	2.6	25									2.6	25
R-5	SF	2.1	25									2.1	25
R-6	SF	1.4	16									1.4	16
R-7	SF	1.4	19									1.4	19
R-8	SF	2.2	21									2.2	21
R-9	SF	13.6	98									13.6	98
R-10	SF	17.6	155									17.6	155
<b>Subtotal</b>		<b>54.3</b>	<b>481</b>									<b>54.3</b>	<b>481</b>
R-9	SF			7.0	51							7.0	51
R-10	SF			1.8	15							1.8	15
R-11	SF			4.2	27							4.2	27
R-12	SF			7.7	70							7.7	70
R-13	SF			4.7	46							4.7	46
R-14	SF			6.0	67							6.0	67
R-15	SF			4.7	51							4.7	51
R-16	SF			5.9	54							5.9	54
R-17	SF			3.0	26							3.0	26
R-18	SF			2.5	19							2.5	19
R-19	SF			7.9	51							7.9	51
R-20	MF			5.5	44							5.5	44
<b>Subtotal</b>				<b>60.9</b>	<b>521</b>							<b>60.9</b>	<b>521</b>
R-21a thru R-21c	MF							10.8	515			10.8	515
MU-1a thru MU-1d	MF							2.1	80			2.1	80
<b>Subtotal</b>								<b>12.9</b>	<b>595</b>			<b>12.9</b>	<b>595</b>
<b>NON-RESIDENTIAL</b>													
MU-2a thru 2f	MU							6.1				6.1	
O-1	O							5.2				5.2	
CPF-1	CPF							2.6				2.6	
CPF-2	CPF	1.1										1.1	
CPF-3	CPF			0.5								0.5	
P-1	Park							7.9				7.9	
P-2	Park								17.8			17.8	
PVT OS-1	Park	0.2										0.2	
PVT OS-2 thru 8	Park			2.2								2.2	
S-1	School							8.3				8.3	
I-1a	Industrial					6.4						6.4	
I-1b	Industrial					6.1						6.1	
I-2	Industrial					4.4						4.4	
I-3a	Industrial					4.2						4.2	
I-3b	Industrial					7.5						7.5	
<b>Subtotal</b>		<b>1.3</b>		<b>2.7</b>		<b>28.6</b>		<b>30.1</b>		<b>17.8</b>		<b>80.5</b>	
<b>TOTAL</b>												<b>208.6</b>	<b>1,597</b>

\* All acreages are net except those in the single family neighborhoods (R-1 through R-20)

## **B. Density Transfer**

The Otay Ranch University Villages Project includes Villages 3 North and a Portion of Village 4 (Village 3 North), 8 East and 10. These villages are concurrently being planned and processed as separate SPA Plans. Pursuant to the Land Offer Agreement (LOA) between the City of Chula Vista and SSBT LCRE V, LLC (Applicant), 6,897 units are allocated amongst the three SPA Plan Areas. Because these villages will be built out over approximately 15 years and to accommodate future fluctuations in market demand, the LOA permits density transfers between villages of up to 15% of the total units authorized for each village. The criteria are provided in the SPA Plan. The criteria include specific requirements to be met in order for the density transfer to be approved without a SPA Plan Amendment. The Development Services Director will determine, based upon the scope of the proposed density transfer, whether additional information (i.e. traffic, air quality, global climate change, utilities, etc.) is necessary for Administrative Approval of the density transfer.

Pursuant to the LOA, the Applicant may transfer, at its discretion, up to fifteen percent (15%) of the units allocated to a village within the Project to another village within the same Project. The Development Services Director may approve, in his or her discretion, any transfer of units more than fifteen percent (15%) or any transfer of units to another village within Otay Ranch but not within the Project, if all of the following requirements are satisfied.

- The transfer of units between villages is consistent with the village design policies and the Entitlements for the village into which the units are being transferred;
- The total number of units for the Project (6,897) is not exceeded;
- Public facilities and infrastructure including schools and parks are provided based on the final number of units within each village or Planning area;
- The planned identity of the villages are preserved including the creation of pedestrian friendly and transit-oriented development; and
- Preserve conveyance obligations will continue to be based on the Final Map development area; and.
- The Applicant provides proof to the City of Chula Vista that all affected property owners (owners of any parcel subject to the proposed transfer) consent to the Density Transfer.

## **II.6.6. Development Impact Fee Programs**

### **A. Transportation**

The current Transportation Development Impact Fee (TDIF) Ordinance sets forth the calculation of development impact fees. This PFFP uses the CVMC Chapter 3.54 as the basis for the estimated TDIF fees. Table B.5 below illustrates the current fee schedule:

Land Use Classification		TDIF Rate
Residential (Low)	0-6 dwelling units per gross ac.	\$12,494 per DU
Residential (Med.)	6.1-18 dwelling units per gross ac.	\$9,995 per DU
Residential (High)	>18.1 dwelling units per gross ac.	\$7,496 per DU
Senior housing		\$4,998 per DU
Residential mixed use	>18 dwelling units per gross ac.	\$4,998 per DU
Commercial mixed use	< 5 stories in height	\$199,901 per 20,000 sq. ft.
General commercial (acre)		\$199,901 per acre
Regional commercial (acre)	> 60 acres or 800,000 sq. ft.	\$137,432 per acre
High rise commercial (acre)	> 5 stories in height	\$349,826 per acre
Office (acre)	< 5 stories in height	\$112,444 per acre
Industrial RTP (acre)		\$99,958 per acre
18-hole golf course		\$874,566 per acre
Medical center		\$812,097 per acre

*Source: Form 5509 11/7/2013*

The total number of estimated DUs and commercial acres for the Village 3 & a Portion of 4, SPA Plan amendment is presented in Table B.3.

**B. Public Facilities**

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 7, 2006 by adoption of Ordinance 3050. The current fee for single-family residential development is \$9,654/unit, multi-family residential is \$9,127/unit, commercial (including office) development is \$29,921/acre and industrial development is \$9,415/acre. The PFDIF amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the project. The calculations of the PFDIF due for each facility are addressed in the following sections of this report. Table B.6 provides a breakdown of what facilities the fee funds.

Component	Single Family /DU	Multi-Family /DU	Commercial /Acre <sup>1</sup>	Industrial /Acre
<b>Civic Center</b>	\$2,756	\$2,610	\$8,792	\$2,779
<b>Police</b>	\$1,671	\$1,805	\$7,896	\$1,703
<b>Corporation Yard</b>	\$450	\$360	\$7,635	\$3,596
<b>Libraries</b>	\$1,582	\$1,582	\$0	\$0
<b>Fire Suppression</b>	\$1,393	\$1,001	\$3,681	\$731
<b>GIS, Computers, Telecom &amp; Records Management</b>	\$0	\$0	\$0	\$0
<b>Administration</b>	\$601	\$568	\$1,917	\$606
<b>Recreation</b>	\$1,201	\$1,201	\$0	\$0
<b>Total per Residential Unit</b>	<b>\$9,654</b>	<b>\$9,127</b>		
<b>Total per Com<sup>1</sup>/Ind. Acre</b>			<b>\$29,921</b>	<b>\$9,415</b>

<sup>1</sup>Office included in Commercial

*Source: Form 5509 11/7/2013*

### III. FACILITY ANALYSIS

This portion of the PFFP contains 13 separate subsections for each facility addressed by this report. Of the 13 facilities, 11 have adopted Threshold Standards; the Civic Center and Corporation Yard do not. Table B.7 highlights the level of analysis for each facility.

<b>Facility</b>	<b>Citywide</b>	<b>East of I-805</b>	<b>Service Area Sub-basin</b>	<b>Special District</b>
Traffic		✓		
Pedestrian Bridges			✓	
Police	✓			
Fire/EMS	✓		✓	
Schools				✓
Libraries	✓			
Parks, Recreation & Open Space		✓		
Water			✓	✓
Sewer			✓	
Drainage			✓	
Air Quality	✓			
Civic Center	✓			
Corp. Yard	✓			
Fiscal	✓		✓	

Each subsection analyzes the impact of the Otay Ranch Village 3 & a Portion of 4 SPA Project based upon the adopted Threshold Standards. The analysis is based upon the specific goal, objective, and Threshold Standard and implementation measures. The proposed SPA plan is used to determine facility adequacy and is referenced within the facility section.

Each analysis is based upon the specific project processing requirements for that facility, as adopted in the Growth Management Program. These indicate the requirements for evaluating the project consistency with the threshold ordinance at various stages (General Development Plan, SPA Plan/Public Facilities Finance Plan, Tentative Map, Final Map and Building Permit) in the development review process.

A service analysis section is included which identifies the service provided by each facility. The existing plus forecasted demands for the specific facility are identified in the subsection based upon the adopted Threshold Standard.

Each facility subsection contains an adequacy analysis followed by a detailed discussion indicating how the facility is to be financed. The adequacy analysis provides a determination of whether or not the Threshold Standard is being met and the finance section provides a determination if funds are available to guarantee the improvement. If the threshold standard is not being met, mitigation is recommended in the Threshold Compliance subsection, which proposes the appropriate conditions or mitigation to bring the facility into conformance with the Threshold Standard.

## **IV. TRAFFIC**

### **IV.1. Threshold Standard**

- A. Citywide: Maintain Level of Service (LOS) "C" or better, as measured by observed average travel speed on all signalized arterial segments, except that during peak hours a LOS of "D" can occur for no more than two hours of the day.
- B. West of Interstate 805: Those signalized intersections which do not meet the standard above, may continue to operate at their current (year 1991) LOS, but shall not worsen.
- C. Per the Otay Ranch General Development Plan, the internal village streets and roads are not expected to meet the Citywide LOS standard of "C" or better.

### **IV.2. Service Analysis**

The Public Works Department of the City of Chula Vista is responsible for ensuring that traffic improvements are provided to maintain a safe and efficient street system within the City. Through project review, City staff ensures the timely provision of adequate local circulation system capacity in response to planned development while maintaining acceptable LOS. To accomplish their review the Public Works Department has adopted guidelines for Traffic Impact Studies (January, 2001). These guidelines ensure uniformity in the preparation of traffic studies. Further, the guidelines assist in maintaining acceptable standards for planned new roadway segments and signalized intersections at the build out of the City's General Plan and Circulation Element. The Circulation Element of the General Plan serves as the overall facility master plan.

In conformance with requirements of the Congestion Management Program (CMP), an analysis of CMP freeways and arterials is required for any project that generates 2,400 daily or 150 peak hour trips. The *University Villages TIA, Otay Ranch Village 3 North, 8 East and 10, July 31, 2014, by Chen + Ryan* is the basis of the PFFP and the traffic section of the *Environmental Impact Report for the Otay Ranch University Villages Project, August 2014 by Dudek*. The TIA document is referred to as the "Chen+Ryan TIA" throughout this PFFP. The University Villages Project Environmental Impact Report (EIR) is referred to as the Project EIR throughout this PFFP.

The Chen+Ryan TIA addresses both existing and planned circulation system conditions, details necessary improvements and outlines the incremental circulation improvements based upon planned University Villages Project phasing. Further, the Chen+Ryan TIA also include an evaluation of impacts that are considered significant as a result of project development.

### **IV.3 Trip Generation and Phasing**

#### **A. Background:**

The University Villages project includes Otay Ranch Villages 3 North, a portion of Village 4, Village 8 East, and Village 10. The Village 3 North project is expected to generate traffic in 2015, Village 8 East in 2020 and Village 10 in 2025. Necessary project offsite roadway and utility corridor improvements are anticipated to be constructed by others in advance or concurrent with Village 3 North.

**B. Project Trip Generation**

According to the Chen+Ryan TIA, the trip generation associated with the University Villages project including Village 3 North & a portion of Village 4 utilized the SANDAG’s *Guide to Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). Tables C.6 through C.9 display daily, as well as AM and PM peak hour project trips for each of the four development phases (2015, 2020, 2025, and 2030), respectively.

As shown in Table C.1, the project would generate a total of 6,110 daily trips by Year 2015, including 488 AM peak hour trips and 610 PM peak hour trips, all of which would be generated by Village 3 North. No development is anticipated in the portion of Village 4 that is part of the project, by 2015.

Land Use	Units	Trip Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
				%	Trips	%	Trips
Single Family	408	10 / DU	4,080	8	326 (98-in / 228-out)	10	408 (286-in / 122-out)
Multi-Family	250	8 / DU	2,000	8	160 (32-in / 128-out)	10	200 (286-in / 122-out)
CPF	1.0 AC	30 / AC	30	5	2 (1-in / 1-out)	8	2 (1-in / 1-out)
<i>Village 3N by 2015</i>			<i>6,110</i>		<i>488</i> <i>(131-in / 357-out)</i>		<i>610</i> <i>(427-in / 184-out)</i>
<b>Total by 2015</b>			<b>6,110</b>		<b>488</b> <b>(131-in / 357-out)</b>		<b>610</b> <b>(427-in / 184-out)</b>

*Source: Chen+Ryan TIA*

Table C.2 indicates that Village 3 North & a portion of Village 4 would generate a total of 21,459 daily trips by the Year 2020, including 2,007 AM peak hour trips and 2,214 PM peak hour trips. The portion of Village 4 would be fully built out. Together with a partially built-out Village 8 East, approximately 40,736 daily trips would be generated by the Year 2020; including 3,724 AM peak hour trips and 4,120 PM peak hour trips (Chen+Ryan TIA). No development is anticipated in Village 10 by 2020.

**Table C.2  
Village 3 North & portion of 4  
Project Trip Generation - Year 2020**

<b>Village 3 North</b>							
<b>Land Use</b>	<b>Units</b>	<b>Trip Rate</b>	<b>Daily Trips</b>	<b>AM Peak Hour</b>		<b>PM Peak Hour</b>	
				<b>%</b>	<b>Trips</b>	<b>%</b>	<b>Trips</b>
Single Family	1,002 DU	10 / DU	10,020	8	802 (240-in / 561-out)	10	1,002 (701-in / 301-out)
Multi-Family	595 DU	8 / DU	4,760	8	381 (76-in / 305-out)	10	476 (333-in / 143-out)
Mixed-Use Commercial	10 KSF	110 / KSF	1,100	3	33 (20-in / 13-out)	9	99 (50-in / 50-out)
Office	9.8 AC	300 / AC	2,940	14	412 (370-in / 41-out)	13	382 (76-in / 306-out)
Light Industrial	10.2 AC	90 / AC	918	11	101 (91-in / 10-out)	12	110 (22-in / 88-out)
CPF	1.5 AC	30 / AC	45	5	2 (1-in / 1-out)	8	4 (2-in / 2-out)
Elementary School	8.3 AC	90 / AC	747	32	239 (143-in / 96-out)	9	67 (27-in / 40-out)
Neighborhood Park	7.8 AC	5 / AC	39	4	2 (1-in / 1-out)	8	3 (2-in / 2-out)
<b>Village 3 North by 2020</b>			<b>20,569</b>		<b>1,971</b> <b>(943-in / 1,028-out)</b>		<b>2,143</b> <b>(1,213-in / 930-out)</b>
<b>Village 4</b>							
Community Park	17.8 AC	50 / AC	890	4	36 (18-in / 18-out)	8	71 (36-in / 36-out)
<b>Village 4 by 2020</b>			<b>890</b>		<b>36</b> <b>(18-in / 18-out)</b>		<b>71</b> <b>(36-in / 36-out)</b>
<b>Total by 2020</b>			<b>21,459</b>		<b>2,007</b> <b>(961-in / 1,048 - out)</b>		<b>2,214</b> <b>(1,249-in / 966 - out)</b>

*Source: Chen+Ryan TIA*

As shown in Table C.3, Village 3 North & a portion of Village 4 would generate a total of 23,144 daily trips by Year 2025, including 2,104 AM peak hour trips and 2,384 PM peak hour trips. Together with a fully built out Village 8 East (with the exception of the community park) and a partially built out Village 10, approximately 64,308 daily trips would be generated by Year 2025, including 5,474 AM peak hour trips and 6,444 PM peak hour trips (Chen+Ryan TIA).

**Table C.3  
Villages 3 North & portion of 4  
Project Trip Generation - Year 2025**

Land Use	Units	Trip Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
				%	Trips	%	Trips
<b><i>Village 3 North</i></b>							
Single Family	1,002 DU	10 / DU	10,020	8	802 (240-in / 561-out)	10	1,002 (701-in / 301-out)
Multi-Family	595 DU	8 / DU	4,760	8	381 (76-in / 305-out)	10	476 (333-in / 143-out)
Mixed-Use Commercial	20 KSF	110 / KSF	2,200	3	66 (40-in / 26-out)	9	198 (99-in / 99-out)
Office	9.8 AC	300 / AC	2,940	14	412 (370-in / 41-out)	13	382 (76-in / 306-out)
Light Industrial	16.7 AC	90 / AC	1,503	11	165 (149-in / 17-out)	12	180 (36-in / 144-out)
CPF	1.5 AC	30 / AC	45	5	2 (1-in / 1-out)	8	4 (2-in / 2-out)
Elementary School	8.3 AC	90 / AC	747	32	239 (143-in / 96-out)	9	67 (27-in / 40-out)
Neighborhood Park	7.8 AC	5 / AC	39	4	2 (1-in / 1-out)	8	3 (2-in / 2-out)
<b>Village 3N by 2025</b>			<b>22,254</b>		<b>2,068</b> <b>(1,021-in / 1,047-out)</b>		<b>2,313</b> <b>(1,276-in / 1,036-out)</b>
<b><i>Village 4</i></b>							
Community Park	17.8 AC	50 / AC	890	4	36 (18-in / 18-out)	8	71 (36-in / 36-out)
<b>Village 4 by 2025</b>			<b>890</b>		<b>36</b> <b>(18-in / 18-out)</b>		<b>71</b> <b>(36-in / 36-out)</b>
<b>Total by 2025</b>			<b>23,144</b>		<b>2,104</b> <b>(1,039-in / 1,065-out)</b>		<b>2,384</b> <b>(1,312-in / 1,107-out)</b>

*Source: Chen+Ryan TIA*

**Table C.4  
Village 3 North & portion of 4  
Project Trip Generation - Year 2030**

Land Use	Units	Trip Rate	Daily Trips	AM Peak Hour		PM Peak Hour	
				%	Trips	%	Trips
<b>Village 3 North</b>							
Single Family	1,002 DU	10 / DU	10,020	8	802 (240-in / 561-out)	10	1,002 (701-in / 301-out)
Multi-Family	595 DU	8 / DU	4,760	8	381 (76-in / 305-out)	10	476 (333-in / 143-out)
Mixed-Use Commercial	20 KSF	110 / KSF	2,200	3	66 (40-in / 26-out)	9	198 (99-in / 99-out)
Office	16.1 AC	300 / AC	4,830	14	676 (609-in / 68-out)	13	628 (126-in / 502-out)
Light Industrial	23.1 AC	90 / AC	2,079	11	229 (206-in / 23-out)	12	249 (50-in / 200-out)
CPF	1.5 AC	30 / AC	45	5	2 (1-in / 1-out)	8	4 (2-in / 2-out)
Elementary School	8.3 AC	90 / AC	747	32	239 (143-in / 96-out)	9	67 (27-in / 40-out)
Neighborhood Park	7.8 AC	5 / AC	39	4	2 (1-in / 1-out)	8	3 (2-in / 2-out)
<b>Village 3 North by 2030</b>			<b>24,720</b>		<b>2,396</b> <b>(1,316-in / 1,080-out)</b>		<b>2,627</b> <b>(1,339-in / 1,288-out)</b>
<b>Village 4</b>							
Community Park	17.8 AC	50 / AC	890	4	36 (18-in / 18-out)	8	71 (36-in / 36-out)
<b>Village 4 by 2030</b>			<b>890</b>		<b>36</b> <b>(18-in / 18-out)</b>		<b>71</b> <b>(36-in / 36-out)</b>
<b>Total by 2030</b>			<b>25,610</b>		<b>2,432</b> <b>(1,334-in / 1,098-out)</b>		<b>2,698</b> <b>(1,375-in / 1,324-out)</b>

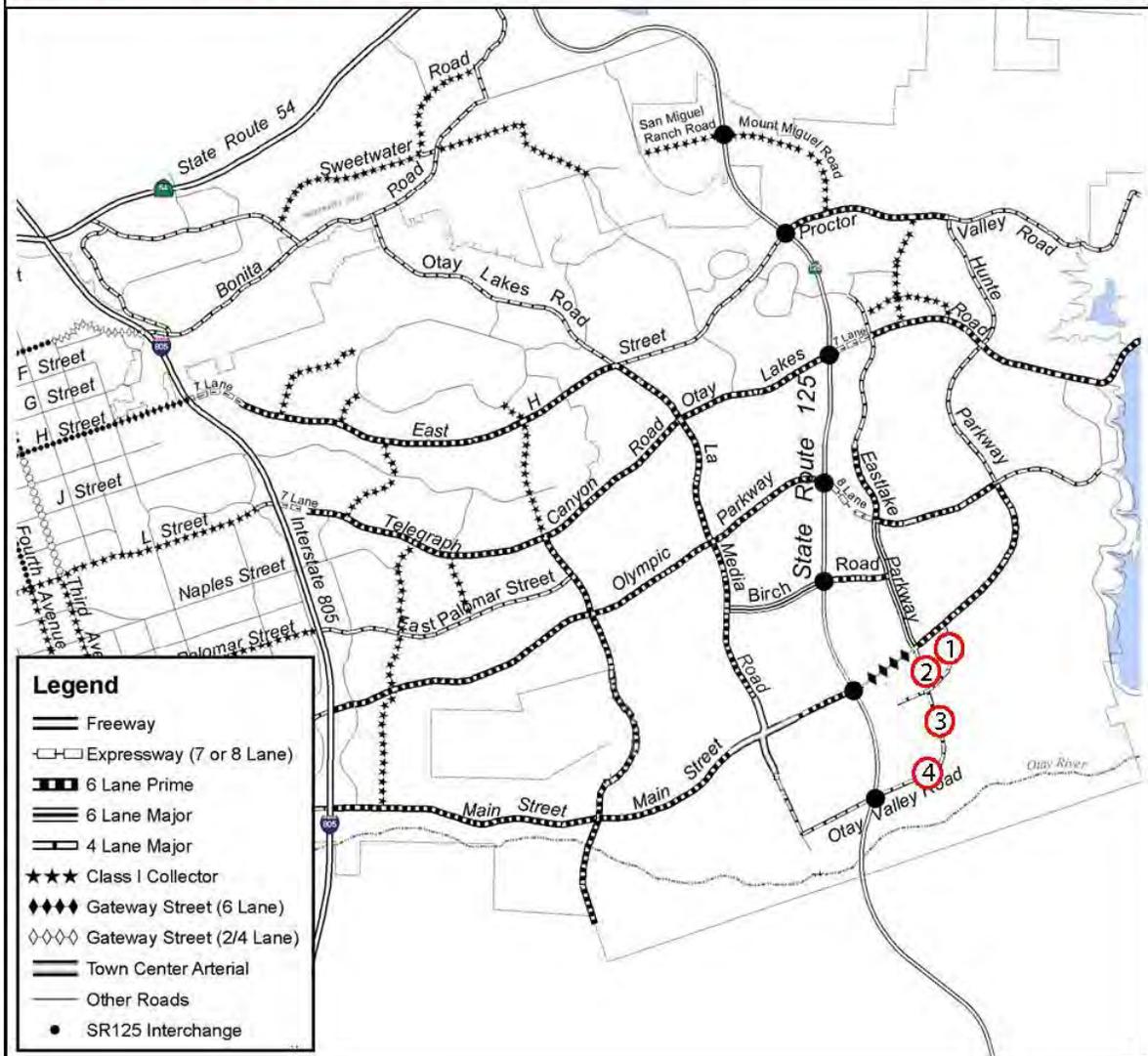
*Source: Chen+Ryan TIA*

As shown in Table C.4, Village 3 North & a portion of Village 4 would generate a total of 25,610 daily trips by Year 2030, including 2,432 AM peak hour trips and 2,698 PM peak hour trips. By 2030, the proposed project including Village 8 East and Village 10 would be built out and generate a total of 77,663 daily trips, including 6,819 AM peak hour trips and 7,816 PM peak hour trips (Chen+Ryan TIA).

The Chen+Ryan TIA disaggregated the project trips into those that would remain within the project site (internally captured), and those that would leave the project site (external trips). Only the external trips were distributed and assigned to the study area roadways and intersections.

**PROPOSED CHANGES**

- ① Extend Discovery Falls Drive southerly and westerly to connect with Village 9 Street "B", and designate Discovery Falls Drive between Hunte Parkway and the University/RTP driveway as a 4-lane Major Road, and designate Discovery Falls Drive between the University/RTP driveway and Village 9 Street "B" as a Class II Collector;
- ② Rename Eastlake Parkway between Hunte Parkway and Discovery Falls Drive as "University Drive". University Drive between Hunte Parkway and University Driveway #1 (northern) will retain its classification as a 4-lane Major Road, and reclassify the segment between University Driveway #1 and Discovery Fall Drive from a 4-lane Major Road to a Class II Collector;
- ③ Rename Eastlake Parkway between Discovery Falls Drive and Otay Valley Road as Village 10 Street "B" ( interim - an official street name will be assigned at a later time), and reclassify this segment from a 4-lane Major Road to a 2-lane non-Circulation Element road (Residential Promenade Street w/ Village Pathway); and
- ④ Reclassify Otay Valley Road, east of Village 9 Street "B" from a 4-lane Major Road to a 2-lane non-Circulation Element road (Secondary Village Entry w/ Median).



Source: Chen+Ryan TIA

**Exhibit 5  
Circulation Plan**

**Chula Vista Circulation Element**

The City Council recently certified the Supplemental Environmental Impact Report (SEIR) and adopted the related Amendments to the City of Chula Vista General Plan (GPA-09-01) and Otay Ranch General Development Plan (PCM-09-11). The adopted Circulation Element and the proposed changes are shown in Exhibit 5. The Chen+Ryan TIA analyzed the City’s Circulation Element and recommended changes based on average daily trips (ADT) and the trigger points for needed improvements. The detailed analysis can be found in Section 11 of the Chen+Ryan TIA.

**IV.4. PFFP Assessment**

The purpose of this Public Facilities Financing Plan (PFFP) assessment is to determine on-site and off-site improvement triggers required for the proposed project. Subsequent Section A discusses on-site and adjacent facilities needed based on access and frontage. Section B discusses Equivalent Dwelling Units (EDUs) associated with each of the mitigation measures identified in Chen+Ryan TIA Chapters 6.0 through 9.0 (analysis years 2015, 2020, 2025, and 2030).

**A. Internal Intersection Traffic Signal Warrants**

Traffic signal warrants were conducted by Chen+Ryan for Villages 3 North, 8 East, and 10. Due to the fact that all of the intersections are not yet built and actual traffic volumes cannot be counted, Figure 4C-103 (CA) of the California Manual on Uniform Traffic Control Devices (MUTCD) was utilized to determine whether a traffic signal would be warranted at identified locations utilizing projected traffic volumes. Table C.5 summarizes the findings. Signal warrants worksheets are included in the Chen+Ryan TIA Appendix A. As shown below, no internal intersection within Village 3 North & portion of 4 SPA Plan requires a traffic signal.

<b>Table C.5 Village 3 North &amp; portion of 4 Summary of Internal Intersection Signal Warrants</b>				
<b>Intersection</b>	<b>Warrant #1 – Minimum Vehicular</b>	<b>Warrant #2 – Interruption of Continuous Traffic</b>	<b>Warrant #3 – Combination (fulfilled 80% of Warrants #1 &amp; #2)</b>	<b>Traffic Signal</b>
Santa Maya / Tributary Street	No	No	No	No
Avenida Sierra / Tributary Street	No	No	No	No
Santa Picacho / Tributary Street	No	No	No	No
Santa machete / Tributary Street	No	No	No	No

*Source: Chen+Ryan TIA*

**B. Access / Frontage Thresholds**

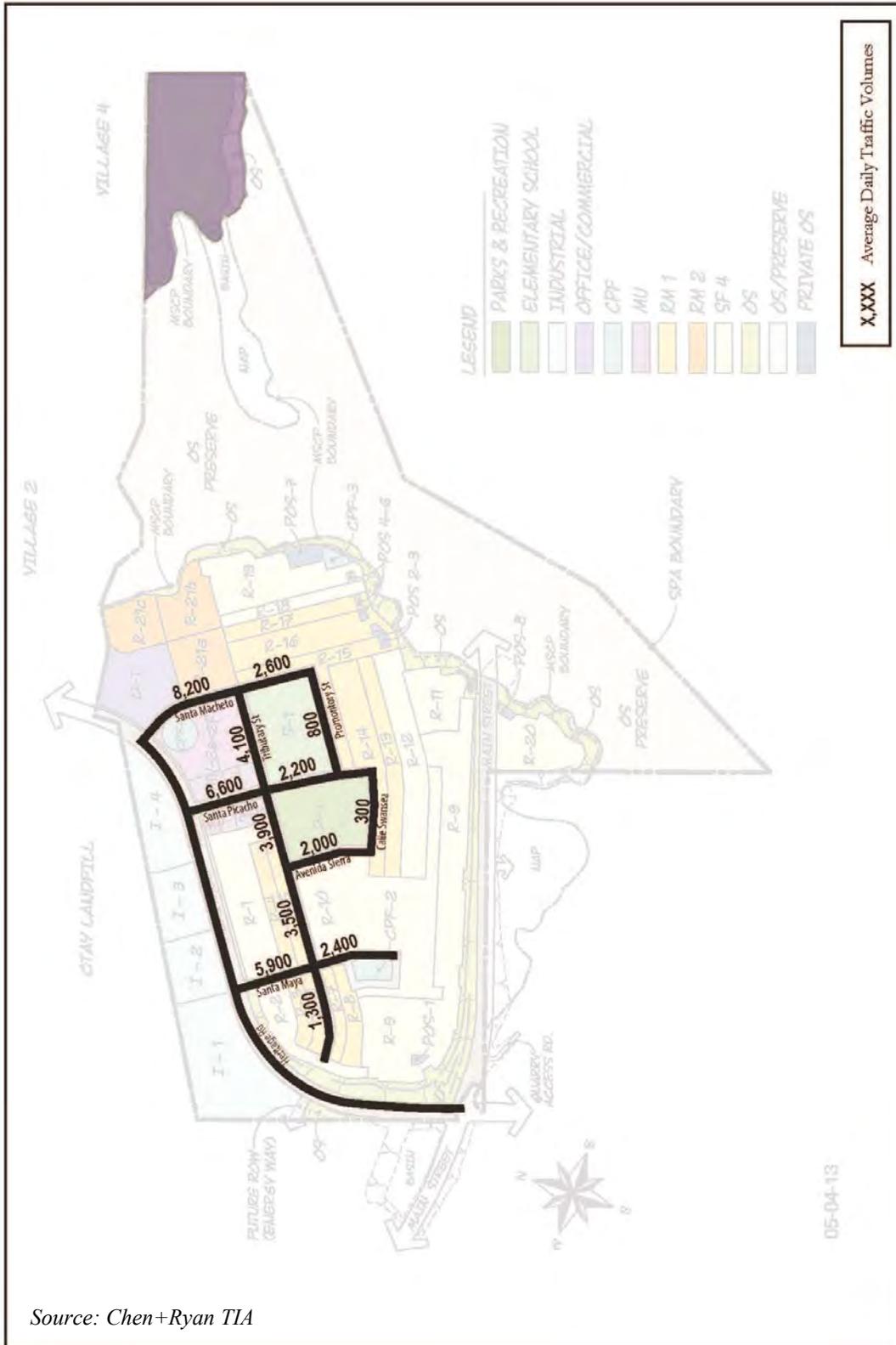
Based on the Chen+Ryan TIA, the facilities presented in this section are required. This requirement is not based on traffic generation, but on frontage development. These roadways must be built when the land uses fronting the roads are developed to provide sufficient number of access points according to the City’s Subdivision Manual.

The Subdivision Manual requires that “single-family residential development shall not exceed 120 residential lots unless two points of access are provided and shall not exceed 200 residential lots unless three points of access are provided”. The project applicant may also conduct a traffic study (prior to the 201<sup>st</sup> EDU) which shows traffic operations with one or two access points are sufficient from an LOS perspective and a Fire/Emergency Response standpoint, to serve individual neighborhoods to the satisfaction of the Development Services Director. Table C.8 & C.9 summarizes the PFFP thresholds for Village 3 North based on frontage and access requirements.

Table C.6 displays recommended roadway classifications and resulting LOS for the Village 3 North internal roadway segments. LOS D is considered acceptable for internal roadways within Otay Ranch. As shown in the table, all of the analyzed internal roadway segments within Village 3 North would operate at acceptable LOS A under buildout conditions with the Chen+Ryan recommended roadway classifications (see Exhibit 6).

<b>Internal Roadway</b>	<b>Segment</b>	<b>Estimated ADT</b>	<b>Recommended Classification</b>	<b>LOS D Threshold</b>	<b>LOS</b>
Tributary Street	from Santa Macheto to Santa Picacho	4,100	Residential Promenade Street (2-lane)	8,400	A
Tributary Street	from Santa Picacho to Avenida Sierra	3,900	Residential Promenade Street (2-lane)	8,400	A
Tributary Street	from Avenida Sierra to Santa Maya	3,500	Residential Promenade Street (2-lane)	8,400	A
Tributary Street	from West of Santa Maya	1,300	Residential Promenade Street (2-lane)	8,400	A
Santa Maya	from Heritage Road to Tributary Street	5,900	Secondary Village Entry with Median (3-lane)	13,500	A
Santa Maya	from Tributary Street to Sunland Street	2,400	Residential Promenade Street (2-lane)	8,400	A
Avenida Sierra	from Tributary Street to Calle Swansea	2,000	Parkway Residential (2-lane)	8,400	A
Calle Swansea	from Santa Picacho to Avenida Sierra	300	Residential Promenade Street (2-lane)	8,400	A
Santa Picacho	from Heritage Road to Tributary Street	6,600	Secondary Village Entry with Median (3-lane)	13,500	A
Santa Picacho	from Tributary Street to Calle Swansea	2,200	Secondary Village Entry with Median (3-lane)	13,500	A
Promontory Street	from Santa Macheto to Santa Picacho	800	Residential Promenade Street (2-lane)	8,400	A
Santa Macheto	from Heritage Road to Tributary Street	8,200	Secondary Village Entry with Median (3-lane)	13,500	A
Santa Macheto	from Tributary Street to Promontory Street	2,600	Secondary Village Entry with Median (3-lane)	13,500	A

*Source: Chen Ryan TIA*



## Exhibit 6 PFFP Roadways for Village 3 North

Internal Streets:

Table C.7 summarizes the PFFP thresholds for Village 3 North based on frontage and access requirements.

<b>Table C.7</b>			
<b>Village 3 North Internal Neighborhood Streets</b>			
<b>Neighborhood</b>	<b>Frontage/Internal Streets (FROM/TO)</b>	<b>Primary Access<sup>1</sup></b>	<b>Secondary Access<sup>2,3</sup></b>
R-1	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Zander Street)</li> <li>• Calle Thania (Santa Maya/Zander St.)</li> <li>• Zander Street (Santa Maya/Calle Thania)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary St)</li> <li>• Tributary Street (Santa Picacho/Calle Thania)</li> <li>• Calle Thania (Tributary Street/Zander Street)</li> </ul>
R-2	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Zander Street)</li> <li>• Langdon Street (Zander Street/Teagle Street)</li> <li>• Zander Street (Santa Maya/Langdon Street)</li> <li>• Covina Place (Cul-de-sac)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Langdon Street)</li> </ul>
R-3	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Zander Street (Santa Maya/Langdon Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Santa Maya)</li> </ul>
R-4	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Zander Street (Santa Maya/Calle Thania)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Calle Thania)</li> <li>• Calle Thania (Tributary Street/Zander Street)</li> </ul>
R-5	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Calle Thania)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Calle Thania)</li> </ul>
R-6	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Langdon Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Santa Maya)</li> </ul>
R-7	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Langdon Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Santa Maya)</li> </ul>
R-8	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Teagle Street)</li> <li>• Teagle Street (Santa Maya/Langdon Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Langdon Street)</li> <li>• Langdon Street (Tributary Street/Teagle Street)</li> </ul>

**Table C.7  
Village 3 North Internal Neighborhood Streets**

Neighborhood	Frontage/Internal Streets (FROM/TO)	Primary Access <sup>1</sup>	Secondary Access <sup>2,3</sup>
R-9	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Teagle Street)</li> <li>• Teagle Street (Santa Maya/Langdon Street)</li> <li>• Langdon Street (Teagle Street/Patchen Avenue)</li> <li>• Avenida Tejon (Teagle Street/Langdon Street)</li> <li>• Kocher Avenue (Teagle Street/Langdon Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Langdon Street)</li> </ul>
R-10	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Sunland Street)</li> <li>• Teagle Street (Santa Maya/Lexington Avenue)</li> <li>• Lexington Avenue (Teagle Street/Langdon Street)</li> <li>• Calle Merced (Lexington Avenue/Santa Picacho)</li> <li>• Sunland Street (Lexington Avenue/Avenida Prado)</li> <li>• Tributary Street (Santa Maya/Avenida Sierra)</li> <li>• Nancarrow Avenue (Tributary Street/Sunland Street)</li> <li>• Mammoth Avenue (Tributary Street/Sunland Street)</li> <li>• Avenida Prado (Tributary Street/Sunland Street)</li> <li>• Avenida Sierra (Tributary Street/Calle Swansea)</li> <li>• Calle Swansea (Avenida Prado/Avenida Sierra)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Santa Maya)</li> </ul>
R-11	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Calle Merced)</li> <li>• Calle Merced (Santa Picacho/Santa Macheto)</li> <li>• Avenida Sohn (Calle Merced/Langdon Street)</li> <li>• Paseo Vaccaro (Calle Merced/Langdon Street)</li> <li>• Patchen Avenue (Calle Merced/Langdon Street)</li> <li>• Langdon Street (Avenida Sohn/Patchen Avenue)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Calle Merced)</li> <li>• Calle Merced (Santa Macheto/Santa Picacho)</li> </ul>

**Table C.7  
Village 3 North Internal Neighborhood Streets**

<b>Neighborhood</b>	<b>Frontage/Internal Streets (FROM/TO)</b>	<b>Primary Access<sup>1</sup></b>	<b>Secondary Access<sup>2,3</sup></b>
R-12	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Calle Merced)</li> <li>• Calle Merced (Avenida Prado/Santa Macheto)</li> <li>• Sunland Street (Avenida Prado/Santa Macheto)</li> <li>• Avenida Prado (Calle Merced/Sunland Street)</li> <li>• Santa Macheto (Calle Merced/Sunland Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Sunland Street)</li> <li>• Sunland Street (Santa Maya/Avenida Prado)</li> </ul>
R-13	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Sunland Street)</li> <li>• Sunland Street (Avenida Prado/Santa Macheto)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Sunland Street)</li> <li>• Sunland Street (Santa Maya/Avenida Prado)</li> </ul>
R-14	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Calle Swansea)</li> <li>• Calle Swansea (Avenida Prado/Santa Picacho)</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Avenida Sierra)</li> <li>• Avenida Sierra (Tributary Street/Calle Swansea)</li> </ul>
R-15	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Promontory Street)</li> <li>• Promontory Street (Santa Picacho/Avenida Ainara)</li> <li>• Santa Macheto (Tributary Street/Calle Merced)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Santa Macheto)</li> </ul>
R-16	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Promontory Street)</li> <li>• Promontory Street (Santa Picacho or Santa Macheto /Avenida Ainara)</li> <li>• Avenida Ainara (Tributary Street/Calle Merced)</li> <li>• Calle Merced (Santa Macheto/Arcadia Avenue)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Macheto/Avenida Ainara)</li> </ul>
R-17	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Promontory Street)</li> <li>• Tributary Street (Santa Picacho or Santa Macheto /Arcadia Avenue)</li> <li>• Arcadia Avenue (Tributary Street/Calle Merced)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Macheto/Arcadia Avenue)</li> </ul>
R-18	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Promontory Street)</li> <li>• Promontory Street (Santa Picacho or Santa Macheto /Arcadia Ave.)</li> <li>• Arcadia Avenue (Tributary Street/Calle Merced)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Macheto/Arcadia Avenue)</li> </ul>

<b>Table C.7 Village 3 North Internal Neighborhood Streets</b>			
<b>Neighborhood</b>	<b>Frontage/Internal Streets (FROM/TO)</b>	<b>Primary Access<sup>1</sup></b>	<b>Secondary Access<sup>2,3</sup></b>
R-19	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) (Heritage/Promontory Street)</li> <li>• Promontory Street (Santa Picacho/Avenida Avalon)</li> <li>• Avenida Hermosa (Tributary Street/Calle Merced)</li> <li>• Avenida Avalon (Tributary Street/Promontory Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (or Santa Macheto) from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Macheto/Avenida Avalon)</li> </ul>
R-20	<ul style="list-style-type: none"> <li>• Main Street (Heritage/Avenida Seneca)</li> <li>• Avenida Seneca</li> </ul>	<ul style="list-style-type: none"> <li>• Main Street</li> </ul>	<ul style="list-style-type: none"> <li>• N/A – fewer than 120 units</li> </ul>
R-21	<ul style="list-style-type: none"> <li>• Santa Macheto (Heritage/Tributary Street)</li> <li>• Kire Court</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Macheto from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Picacho/Avenida Avalon)</li> </ul>
MU1	<ul style="list-style-type: none"> <li>• Santa Picacho (Heritage to Tributary Street)</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Picacho from Heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Santa Maya (Heritage/Tributary Street)</li> <li>• Tributary Street (Santa Maya/Santa Picacho)</li> </ul>

Notes:

<sup>1</sup> Primary access identified is one possible route. Alternative access may be provided subject to the approval of the Director of Development Services.

<sup>2</sup> Secondary access is required when more than 120 units are served by the primary access. The identified secondary access is one possible route; alternative secondary access may be provided subject to the approval of the Director of Development Services.

<sup>3</sup> If total units utilizing either the primary or secondary routes of access exceeds 200, a third access may be required, subject to the approval of the Director of Development Services.

Source: Chen+Ryan TIA

#### Off-Site Project Frontage/Access

Table C.8 summarized the roadway segments and intersection to be constructed by the project for Frontage and Access, their cross-section/geometric configuration, as well as their associated EDU threshold.

<b>Table C.8 Village 3 North &amp; portion of 4 Frontage And Access Threshold</b>				
<b>Street</b>	<b>Segment</b>	<b>Classification<sup>1</sup></b>	<b>EDU threshold</b>	<b>Year assumed build in TIA</b>
Heritage Road	Village 3 Northern Boundary to Santa Macheto	6-Ln w/RM	612 <sup>th</sup> EDU of Village 3	2020
Heritage Road	Santa Macheto to Santa Picacho	6-Ln w/RM	201 <sup>st</sup> EDU of Village 3	2015
Heritage Road	Santa Picacho to Santa Maya	6-Ln w/RM	121 <sup>st</sup> EDU of Village 3	2015

<b>Table C.8 Village 3 North &amp; portion of 4 Frontage And Access Threshold</b>				
<b>Street</b>	<b>Segment</b>	<b>Classifi- cation<sup>1</sup></b>	<b>EDU threshold</b>	<b>Year assumed build in TIA</b>
Heritage Road	Santa Maya to Main Street	6-Ln w/RM	prior to the first Final Map of Village 3	2015
Main Street	Heritage Road to Village 3 R-20 Driveway (Int #66)	2-Ln w/ RM	prior to the first Final Map of Village 3 R-20	2020
		6-Ln w/RM	widen to 6-Ln w/ RM in conjunction with the construction of Main Street Bridge	2025
<b>Village / Intersection #</b>	<b>Intersection</b>	<b>Control<sup>2</sup></b>	<b>EDU threshold</b>	
Village 3 - #61	Santa Macheto / Heritage Road	AWSC Signal	201 <sup>st</sup> EDU of Village 3 612 <sup>th</sup> EDU of Village 3	2020
Village 3 - #62	Santa Piacho / Heritage Road	AWSC Signal	121 <sup>st</sup> EDU of Village 3 612 <sup>th</sup> EDU of Village 3	2015
Village 3 - #63	Santa Maya / Heritage Road	AWSC Signal	prior to the first Final Map of Village 3 612 <sup>th</sup> EDU of Village 3	2015
Village 3 - #65	Quarry Driveway / Main Street	AWSC	prior to the first Final Map of Village 3 R-20	2020
		Signal	Signalized in conjunction with the construction of Main St Bridge	2025
Village 3 - #66	Village 3 North R-20 Driveway / Main Street	AWSC	prior to the first Final Map of Village 3 R-20	2020
		Signal	Signalized in conjunction with the construction of Main St Bridge	2025
Village 4 - #67	La Media Road / Village 4 Driveway/Santa Luna St.	Signal	prior to the first Final Map of Village 4	2020
<sup>1</sup> RM = Raised Median <sup>2</sup> AWSC = All Way Stop Control				

*Source: Chen+Ryan TIA*

**C. SR-125 / Main Street Interchange**

The Chen+Ryan TIA discusses the different configurations and associated traffic and safety operations at the SR-125 / Main Street interchange and evaluated the future ramp intersection operations at the SR-125/Main Street interchange with three (3) types of interchange configurations, including:

- Option A: full interchange with partial cloverleaf;
- Option B: diamond interchange; and
- Option C: half interchange with partial cloverleaf.

Option A was the configuration utilized in the TIA analysis is based on the fact that the other SR-125 interchanges in the vicinity, such as Birch Road, Olympic Parkway, and Otay Lakes Road, all have the identical layout.

The TIA determined that ramp intersections at the SR-125 SB Ramps / Main Street and SR-125 NB Ramps / Main Street would operate at acceptable LOS D or better under Year 2030 conditions under all three options, with the “full Interchange with partial cloverleaf” (Option A) providing the best traffic operations in terms of queue length, average delay and levels of service.

**D. Equivalent Dwelling Units Thresholds**

The off-site roadway and intersection improvements as discussed in CHEN+RYAN TIA are needed primarily based on traffic generation and are associated with each of the mitigation measures identified from the Year 2015, 2020, 2025, and 2030 analyses.

The C+R TIA provides details on how the EDU triggers were derived.

Appendix B of the Chen+Ryan TIA documents how EDU triggers are determined for each of the recommended mitigation measures.

Table C.9 summarizes the required mitigation measures and their associated EDU triggers.

<b>Table C.9 Village 3 North EDU Triggers To Recommended Mitigation Measures</b>			
<b>Location</b>	<b>Mitigation Measure</b>	<b>Analysis Year</b>	<b>EDU Trigger</b>
<b>Intersection</b>			
11. I-805 SB Ramps / Olympic Pkwy	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
12. I-805 NB Ramps / Olympic Pkwy	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
14. Brandywine Ave. / Olympic Pkwy	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
15. Heritage Road / Olympic Parkway	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St Bridge) <sup>1</sup>	2025	4,737 <sup>th</sup> EDU of V3N + V8W + V10
17. La Media Road / Olympic Parkway	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St Bridge) <sup>1</sup>	2025	4,737 <sup>th</sup> EDU of V3N + V8W + V10
39. Heritage Road / Main Street	Signalization	2020	751 <sup>st</sup> EDU of V3N
<b>Roadway Segment</b>			
Orange Avenue between Melrose Avenue and I-805 SB Ramps	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
Olympic Parkway between I-805 SB Ramps and I-805 NB Ramps	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N

**Table C.9  
Village 3 North  
EDU Triggers To Recommended Mitigation Measures**

<b>Location</b>	<b>Mitigation Measure</b>	<b>Analysis Year</b>	<b>EDU Trigger</b>
Olympic Parkway between I-805 NB Ramps and Oleander Avenue	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
Olympic Parkway between Oleander Avenue and Brandywine Avenue	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
Olympic Parkway between Brandywine Avenue and Heritage Road	Construction of Heritage Road	2020	956 <sup>th</sup> EDU of V3N
Olympic Parkway between Heritage Road and Santa Venetia Street	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St Bridge) <sup>1</sup>	2025	4,737 <sup>th</sup> EDU of V3N + V8W + V10
Heritage Road between East Palomar Street and Olympic Parkway	Payment towards TDIF (for the construction of Main St from Heritage Rd to La Media Rd, including construction of Main St. Bridge) <sup>1</sup>	2025	4,737 <sup>th</sup> EDU of V3N + V8W + V10
Footnote: <sup>1</sup> The City CIP will drive the timing of this facility, which may occur sooner.			

*Source: C+R TIA*

**E. Quarry Access**

The Village 3 North & portion of Village 4 SPA Plan area is located at the southwestern limit of the Otay Valley Parcel of Otay Ranch. Immediately surrounding the SPA Plan area are existing and planned development areas. The future Otay Ranch Village 2 is located north, the Wolf Canyon Preserve and an active quarry are located east. Existing industrial land uses are located to the west and the Otay Landfill is located to the north. This section briefly discusses traffic operations and safety at the quarry access off of Main Street under conditions with (ultimate) and without (interim) the Main Street connection over Wolf Canyon.

The Chen+Ryan TIA made operational assumptions based on input from the quarry manager. The Chen+Ryan TIA recommends an interim design for access since the Main Street over Wolf Canyon is not likely to be constructed until Year 2025. In the interim design, Main Street would terminate at the quarry access road approximately 210' east of Heritage Road. Since no traffic movements would be in conflict with the ingress/egress at the quarry access, no traffic operations or safety issues would be anticipated in the interim years. The traffic signal at the Heritage Road and Main Street intersection should be designed as a standard eight-phase actuated signal. The westbound green indication would only be triggered by the arrival of westbound traffic. Proper signage should be displayed indicating that the east leg (Main Street, east of Heritage Road) is for "Quarry Access Only".

After 2025 when Main Street between Heritage Road and La Media is constructed, the ultimate design for the quarry access would be located approximately 350' east of Heritage Road.

The quarry access is proposed to be signalized at Main Street. This proposed traffic signal must be coordinated with the traffic signal at the Heritage Road and Main Street intersection. Intersection LOS and average vehicle delay results for both Heritage Road / Main Street and Quarry Access Road / Main Street intersections under the Year 2030

conditions are detailed in the Chen+Ryan TIA. Further, LOS calculation worksheets are provided in the Chen+Ryan TIA Appendix AB.

Pursuant to the Chen+Ryan TIA, the quarry access at Main Street would operate at LOS A with minimum delay in Year 2030. The analysis indicates that the westbound left-turn pocket should be designed at 200' to accommodate the maximum queue. Recommended mitigation is included in the Threshold Compliance and Requirements.

Quarry Access and associated Traffic Signal construction shall be phased as follows:

- Prior to approval of the final map containing the 751<sup>st</sup> EDU within Village 3 North, the Applicant shall install a traffic signal at the intersection of Main Street and Heritage Road. Two-lane access to the Quarry shall be provided and shall include all-way stop control.
- Prior to approval of the final map containing neighborhood R-20, Main Street shall be constructed as a 2-lane roadway from Heritage Road to the eastern project boundary. Improvements will include all-way stop control at both the intersection of Main Street and the Quarry Driveway and Main Street and the R-20 driveway.
- At full build-out of Main Street between Heritage Road and the eastern Village 3 North boundary, improvements shall include the traffic signal at the intersection the Quarry Access and Main Street. The Quarry Access/Main Street traffic signal shall be funded by the City's Main Street TDIF/CIP program. The Applicant shall be responsible for funding and constructing improvements at the intersection of Main Street and the R-20 driveway, including installation of the traffic signal.

#### **IV.5 Cost & Financing Traffic Improvements**

The Chen+Ryan TIA was prepared for the proposed University Villages Project (including Village 8 East), which is the basis of this PFFP and the Project EIR. The project traffic mitigation measures are identified in Section 5.3.5 of the Project EIR. These measures comply with CEQA requirements and are consistent with existing city standards and growth management thresholds. The timing of the frontage and access streets are the responsibility of the developer. The PFFP and Project EIR identifies triggers to ensure the street system is constructed prior to or concurrent with the identified need.

##### **A. Street Improvements**

The Otay Ranch Village 3 North & a Portion of 4 SPA internal streets and associated signalization, if required, are the financial responsibility of the Developer/Builder (see Table C.11). Off-site streets and signal improvements are subdivision exactions. The required development phasing is based on the Chen+Ryan TIA.

##### **B. Transportation Development Impact Fee (TDIF)**

The project is within the boundaries of the TDIF program and, as such, the project is subject to the payment of the fees at the rates in effect at the time building permits are issued. However, the improvements identified on Table C.9 will be required to be constructed according to the approved EDU Triggers. The TDIF ordinance allows for the issuance of credit in lieu of fees when an eligible facility is constructed by the project. If the total eligible construction cost amounts to more than the total required TDIF fees as indicated below, the owner/developer may be given credits toward future building permits outside of the SPA area.

The current TDIF Ordinance sets forth the calculation of development impact fees. This PFFP uses the CVMC Chapter 3.54 as the basis for the estimated TDIF fees. Table B.5 illustrates the fee schedule at the time of this PFFP preparation:

Table C.10 presents the total number of estimated DUs, office, industrial and commercial acres for the Village 3 North & a Portion of 4 SPA Plan PFFP. Also, Table C.10 summarizes the estimated TDIF based on the Developer's proposed phasing and trip generation rates used by the Chen+Ryan TIA. The table is provided as an estimate only. Fees may change depending upon the actual number dwelling units, the actual acreage for commercial and industrial land and the current city fee, which is subject to change from time to time. Final calculations will be known at time building permits are applied for.

Phase	SF DU	Fee/SF DU	MF DU	Fee/MF DU	MU DU	MU Fee	MU Com'l	Com'l Fee/ 20K sf	Office	Office Fee/ Acre	Ind. Acre	Ind. Fee/ Ac	Fees
<b>Red</b>	481	\$12,494	0	\$0	0	\$0	0.0	\$0	0.0		0	\$0	\$6,509,374
<b>Blue</b>	521	\$12,494	0	\$0	0	\$0	0.0	\$0	0.0		0	\$0	\$6,009,614
<b>Yellow</b>	0	\$0	0	\$0	0	\$0	0.0	\$0	0.0		28.6	\$99,958	\$2,858,799
<b>Green</b>	0	\$0	515	\$9,995	80	\$4,998	20K	\$199,901	5.2	\$112,444	0	\$0	\$6,331,875
<b>Purple</b>	0	\$0	0	\$0	0	\$0	0.0	\$0	0.0		0	\$0	\$0
<b>Total</b>	<b>1002</b>		<b>515</b>		<b>80</b>		<b>20K</b>				<b>28.6</b>		<b>\$21,709,662</b>

Estimated TDIF is based on the Revised November 7, 2013, City of Chula Vista Development Checklist for Municipal Code Requirements (Form 5509) and is subject to annual adjustments. Actual TDIF may be different.

**C. Traffic Signal Fee**

Future development within the project will be required to pay Traffic Signal Fees in accordance with Chula Vista Council Policy No. 475-01. The estimated fee is calculated based on the current fee of \$34.27 (the date of this PFFP) per vehicle trip generated per day for various land use categories. Table C.11 is provided as an estimate only. Fees may change depending upon the actual number dwelling units, the actual acreage for commercial and industrial land and the current city fee, which is subject to change from time to time. Final calculations will be known at time building permits are applied for.

Year	Project Trips	Traffic Signal Fee @ \$34.27/Trip
2015	6,110	\$209,390
2020	15,349	\$526,010
2025	1,685	\$57,745
2030	2,466	\$84,510
Total	25,610	\$877,655

Estimated Traffic Signal Fee is based on the Revised November 7, 2013, City of Chula Vista Development Checklist for Municipal Code Requirements (Form 5509) and is subject to annual adjustments. Trips are estimated, based on the Chen+Ryan TIA, actual trips and Traffic Signal Fees may be different. Fees paid at the time building permit.

**D. Non-DIF Streets and Signals**

Internal public streets and signals are not eligible for DIF credit pursuant to city policy. These streets and signals will be funded by the development.

#### IV.6. Threshold Compliance

- A. The facilities presented in this section are needed, not based on traffic generation, but on access and frontage development. These roadways need to be built when the land uses fronting the roads are developed in order to provide sufficient number of access points according to the City's Subdivision Manual.
- B. The Subdivision Manual requires that "single-family residential development shall not exceed 120 residential lots unless two points of access are provided and shall not exceed 200 residential lots unless three points of access are provided". The project applicant will conduct a traffic study (prior to the 201<sup>st</sup> EDU) which shows traffic operations with one or two access points are sufficient from an LOS perspective to serve the village and to the satisfaction of the City Engineer.
- C. Table C.7 summarizes the PFFP thresholds for Village 3 North & a portion of Village 4 based on access and frontage requirements. Non-sequential phasing is planned.
- D. The project shall be conditioned to pay TDIF Fees and Traffic Signal Fees at the rate in effect at the time building permits are issued.
- E. Table C.6 summarizes the required mitigation measures and their associated Equivalent Dwelling Units (EDU) triggers.
- F. Based on the results of the Chen+Ryan TIA for the quarry access at Main Street, the westbound left-turn pocket should be designed at 200' to accommodate the maximum queue. In addition to the 200' westbound left-turn pocket length, the following is also recommended to ensure safety and smooth operations at the intersection of Quarry Access Road and Main Street:
  - "No-Turn On Red" sign and/or signal indication to be placed at the northbound quarry access approach to prohibit trucks from making right turns onto Main Street on red;
  - Proper signage and pavement marking to be installed indicating "Quarry Access Only";
  - Adequate turning radii to be provided for trucks; and
  - No pedestrian crossing at Main Street.
- G. In addition to the identified thresholds, the City of Chula Vista shall require the following prior to issuance of each Final Map:
  - Owner/Developer shall be responsible for assuring right-of-way improvements (curb, gutter, street, sidewalk, landscape, and traffic controls) necessary for vehicular and pedestrian connection from the subject map area to existing public roadways. Connection shall be provided to the satisfaction of the City Engineer.
  - Owner/Developer shall be responsible for assuring enhancements within the right-of-way (landscaping, pedestrian lighting, and street furniture) which about the subject map area.
  - Owner/Developer shall be responsible for assuring all in-tract improvements within the subject map area.
  - Owner/Developer shall be responsible for assuring enhancements outside the right-of-way and internal to the subject map area (open space lots, landscape and irrigation of slopes).
  - Prior to issuance of Final Map, Owner/Developer shall assure applicable off-site infrastructure improvements (storm drains, water quality facilities) which are sized to serve subject map area.
  - The owner/developer for any individual neighborhood shall be required to post or

provide use of surety bonds which secure the Owner/Developer's construction cost of the infrastructure requirements identified above. The bond shall be for the value of improvements necessary to complete approved public improvements. Permission to use existing, approved improvement plans and bonds shall be an acceptable means of satisfying the above listed requirements, to the satisfaction of the city engineer.

Additional notes:

- Modification to any of the above listed requirements requires approval by the City Engineer.
- Final map phases of subject tentative maps shall include all remaining in-tract improvements and shall not be less than 10 units.

H. The project applicant shall comply with the Project EIR Transportation, Circulation and Access mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following is a summary of these mitigation measures:

**TCA-1** Prior to the issuance of the building permit for the 2,463rd DU for development east of 1-805 commencing from April 4, 2011, the Applicant may:

- a. Prepare a traffic study that demonstrates, to the satisfaction of the City Engineer, that the circulation system has additional capacity without exceeding the GMO traffic threshold standards. The City's determination regarding the adequacy of the circulation system shall be based on whether the quality of life threshold standards for traffic set for in the City of Chula Vista GMO (Chapter 19,09 of the Chula Vista Municipal Code) are met; The current traffic threshold is to maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments, except, that during peak hours a LOS "D" can occur for no more than two hours; or
- b. Demonstrate that other improvements are constructed which provide the additional necessary capacity to comply with the GMO traffic threshold to the satisfaction of the City Engineer.
- c. Agree to the City Engineer's selection of an alternative method of maintaining GMO traffic threshold compliance. The City's determination regarding the scope and timing of the alternative method shall be based on demonstrated compliance with the GMO traffic thresholds; or
- d. Enter into agreement, approved by the City, with other Otay Ranch developers that alleviates congestion and achieves GMO traffic threshold compliance for Olympic Parkway. The agreement will identify the deficiencies in transportation infrastructure that will need to be constructed, the parties that will construct said needed infrastructure, and a timeline for such construction, as well as providing assurances for construction, in accordance with the City's customary requirements, for said infrastructure.

If GMO compliance cannot be achieved through 1a, 1 b, 1 c, or 1 d, then the City shall stop issuing new building permits within the project area, after building permits for 2,463 DU have been issued for any development east of 1-805 after April 4, 2011, until such time that GMO traffic threshold standard compliance can be assured to the satisfaction of the City Manager.

These measures shall constitute full compliance with growth management objectives and policies in accordance with the requirements of the General Plan, Chapter 10, and with regard to traffic thresholds set forth in the GMO.

**TCA-2:** Project applicant shall construct the access and frontage improvements consistent with the triggers identified in Table 5.3-56 of the Project EIR to the satisfaction of the Director of Development Services and the City Traffic Engineer.

**TCA-3** The year 2015 scenario assumes the following intersection and roadway improvements are in place:

- Phase 1 of the I-805 South Project, including improvements to I-805 between Home Avenue and East Palomar Street
- Heritage Road, south of Main Street to the Chula Vista city limit as a 4-lane Major Road.

"If the project equivalent dwelling unit limit of 611th EDU is exceeded prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken, each to the satisfaction of the City Engineer:

- i. Development in Village 3 and the Portion of Village 4 and Village 8 East shall stop until those assumed future roadways are constructed by others as presently planned; or
- ii. City and the Applicant shall meet to determine the need for the incomplete roadway segments. Because a number of factors, including changes to the tolling structure at SR-125, may affect future traffic patterns in Otay Ranch, the applicant shall submit to the city additional traffic analysis of the roadway network and levels of service at that time to determine: (i) if such improvements in fact are necessary; and (ii) the scope and timing of additional circulation improvements, if any; The City's determination of whether such improvements are necessary, or the scope and timing of additional improvements, shall be based on whether the City's traffic quality of life threshold standards are met, consistent with the performance standards set forth in the City of Chula Vista Growth Management Ordinance (GMO) (Chapter 19.09 of the Chula Vista Municipal Code). The current traffic threshold is to maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments; except, that during peak hours a LOS "D" can occur for no more than two hours; or
- iii. Applicant shall construct the missing roadway links and receive a transportation development impart fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City that is demonstrated to ensure that the applicable GMO quality of life thresholds are met for traffic.

**TCA-4** **Intersections:** I-805 SB Ramps / Olympic Parkway (CV), I-805 NB Ramps / Olympic Parkway (CV), and Brandywine Avenue / Olympic Parkway (CV); **Roadways:** Olympic Parkway, between I-805 SB Ramps and I-805 NB Ramps (CV); Olympic Parkway, between I-805 NB Ramps and Oleander Avenue (CV); Olympic Parkway, between Oleander Avenue and Brandywine Avenue (CV); and Olympic Parkway, between Brandywine Avenue and Heritage Road (CV) – Prior to issuance of the Final Map that contains the 956th equivalent dwelling unit (EDU) in Village 3 North, the project applicant shall construct

Heritage Road, between Olympic Parkway and Main Street, as a Six-Lane Prime Arterial.

- TCA-5** Heritage Road / Main Street (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 751st EDU in Village 3 North, the project applicant shall signalize Heritage Road / Main Street intersection.
- TCA-6** La Media Road (SB) / Main Street (WB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (SB) /Main Street (WB) intersection.
- TCA-7** La Media Road (NB) / Main Street (WB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (NB) /Main Street (WB) intersection.
- TCA-8** La Media Road (SB) / Main Street (EB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (SB) /Main Street (EB) intersection.
- TCA-9** La Media Road (NB) / Main Street (EB) (all-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 880th EDU in Village Eight East, the project applicant shall signalize the La Media Road (NB) / Main Street (EB) intersection.
- TCA-10** Magdalena Avenue / Main Street (one-way stop controlled) (CV) – Prior to issuance of the Final Map that contains the 1,693rd EDU in Village Eight East, the project applicant shall signalize the Magdalena Avenue / Main Street intersection.
- TCA-11** The year 2020 scenario assumes the following intersection and roadway *improvements* are in place:
- Heritage Road, south of Main Street to the Chula Vista city limit as a 6-lane Prime Arterial.
  - Otay Lakes Road between H Street and Telegraph Canyon Road as a 6-lane Prime Arterial.
  - Quarry Driveway (Int #65) @ Main Street as an all-way stop controlled intersection.

If the project equivalent dwelling unit of 4,070th EDU is exceeded prior to these improvements being constructed and open to traffic, then one of the following steps shall be taken each to the satisfaction of the City Engineer:

- i. Development in Village 3 and the Portion of Village 4 and Village Eight 8 shall stop until those assumed future roadways are constructed by others as presently planned; or
- ii. City and the applicant shall meet to determine the need for the incomplete roadway segments. Because a number of factors, including changes to the tolling structure at SR-125, may affect future traffic patterns in Otay Ranch, the applicant shall submit to the City additional traffic analysis of the roadway network and levels of service at that time to determine: (i) if such improvements in fact are necessary; and (ii) the scope and timing of additional circulation improvements, if any; The City's determination of

whether such improvements are necessary, or the scope and timing of additional improvements, shall be based on whether the City's traffic quality of life threshold standards are met, consistent with the performance standards set forth in the City of Chula Vista Growth Management Ordinance (GMO) (Chapter 19.09 of the Chula Vista Municipal Code). The current traffic threshold is to maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments; except, that during peak hours a LOS "D" can occur for no more than two hours; or

- iii. Applicant shall construct the missing roadway links and receive a transportation development impact fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City that is demonstrated to ensure that the applicable GMO quality of life thresholds are met for traffic.

**TCA-12** Intersections: Heritage Road / Olympic Parkway (CV) and La Media Road / Olympic Parkway (CV); Roadways: Olympic Parkway, between Heritage Road and Santa Venetia Street (CV); and Heritage Road, between East Palomar Street and Olympic Parkway (CV) — Prior to the issuance of each building permit, the Project Applicant shall pay the appropriate Transportation Development Impact Fees (TDIF) for the construction of Main Street, between Heritage Road and La Media Road, as a Six-Lane Prime Arterial, including the construction of Main Street bridge, the signalization of Quarry Driveway I Main Street (Int #65), and the signalization of Village Three North R-20 Driveway / Main Street (Int #66). The project will signalize the intersection of Village 3 North R-20 Driveway I Main Street (Int #66) in conjunction with the construction of Main Street, while the TDIF program will signalize the intersection of Quarry Driveway I Main Street (Int #65). The analysis shows the need for Main Street from the Heritage Road to La Media Road is triggered by the 4,737th EDU. If the project equivalent dwelling unit limit of 4,736 EDU is reached prior to this roadway segment being constructed and open to traffic, then one of the following steps shall be taken as determined by the City Engineer:

- i. Development in Villages 3 North, 8 East, and 10 shall stop until the future roadway is constructed by the City; or
- ii. City and the Applicant shall meet to determine the need for the incomplete roadway segments. Because a number of factors, including changes to the tolling structure at SR-125, may affect future traffic patterns in Otay Ranch, the Applicant shall submit to the City additional traffic analysis of the roadway network and levels of service at that time to determine: (i) if such improvements in fact are necessary; and (ii) the scope and timing of additional circulation improvements, if any. The City's determination of whether such improvements are necessary, or the scope and timing of additional improvements, shall be based on whether the City's traffic quality of life threshold standards are met, consistent with the performance standards set forth in the City of Chula Vista Growth Management Ordinance (GMO) (Chapter 19.09 of the Chula Vista Municipal Code). The current traffic threshold is to maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments; except, that during peak hours, a LOS "D" can occur for no more than two hours; or
- iii. Applicant shall construct the missing roadway link and receive a

transportation development impact fee credit for the improvements as applicable; or

- iv. An alternative measure is selected by the City that is demonstrated to ensure that the applicable GMO quality of life thresholds are met for traffic.

**TCA-13 Intersection:** Discovery Falls Drive / Hunte Parkway (CV) – Prior to approval of the Final Map containing the 1,295th EDU of Village 10, the project applicant shall construct a dedicated right-turn lane at the northbound Discovery Falls Drive approach to the Discovery Falls Drive/Hunte Parkway intersection.

**TCA-14** I-805 Northbound On-Ramp at Main Street - Prior to project buildout, the Project Applicant shall work with Caltrans to, and Caltrans can and should, adjust the ramp meter rate at the I-805 northbound on ramp at Main Street such that the ramp meter reflects the additional vehicle traffic attributable to the project.

**TCA-15** The project applicant shall incorporate the following measures as part of the project design and development, consistent with the identified triggers, to the satisfaction of the Director of Development Services:

- Implement pedestrian circulation improvements to improve the internal pedestrian circulation and encourage the usage of public transportation (concurrent with the approval of improvement plans for each village).
- Implement bicycle circulation improvements to improve internal bicycle circulation and encourage the usage of bicycles (concurrent with the approval of improvement plans for each village).
- Participate in car sharing and bike sharing programs through HOA noticing, should such programs become available.
- Promote Carpool/Vanpool programs by providing preferential parking for carpools and vanpools (concurrent with the approval of site plans for each village core).
- Promote available websites providing transportation options for residents and businesses (concurrent with issuance of certificate of occupancy).
- Create and distribute a “new resident” information packet addressing alternative modes of transportation (concurrent with issuance of certificate of occupancy).
- Promote programs to encourage workplace peak hour trip reduction, including staggered work hours, regional ride-matching services, and telecommuting (concurrent with issuance of certificate of occupancy).
- Orient buildings to the main street or activity area, such that they are not separated from the street by vast parking areas or fences, thereby encouraging pedestrian traffic (concurrent with the approval of site plans for each village core).
- Where transit is available on-site, participate in providing the necessary transit facilities, such as bus pads, shelters, signs, lighting, and trash receptacles (concurrent with the approval of improvement plans for each village).
- Coordinate with the MPO as to the future siting of transit stops/stations within the project site (concurrent with the approval of improvement plans, and/or site plans, for each village).

**TCA-16** The year 2030 scenario assumes the following intersection and roadway improvements are in place:

- Main Street between SR-125 right-of-way (western boundary) and Eastlake Parkway/University Drive; is constructed as a 6-lanes Gateway Street (6,432nd EDU)
- SR-125 / Main Street interchange constructed (6,432nd EDU)
- Otay Valley Road constructed between SR-125 right-of-way (western boundary) and Village Nine Street “B” (Int #74), including an overpass at SR-125 (7,767th EDU).

If the project equivalent dwelling unit limit of the EDUs identified above are exceeded prior to the respective improvements being constructed and open to traffic, then one of the following steps shall be taken each to the satisfaction of the City Engineer:

- i. Development in Village 3 and Portion of Village 4, Village 8 East, and Village 10 shall stop until those assumed future roadways are constructed by others as presently planned; or
- ii. City and the Applicant shall meet to determine the need for the incomplete roadway segments. Because a number of factors, including changes to the tolling structure at SR-125, may affect future traffic patterns in Otay Ranch, the Applicant shall submit to the City additional traffic analysis of the roadway network and levels of service at that time to determine: (i) if such improvements are-in fact are necessary; and (ii) the scope and timing of additional circulation improvements, if any. The City's determination of whether such improvements are necessary, or the scope and timing of additional improvements, shall be based on whether the City's traffic quality of life threshold standards are met, consistent with the performance standards set forth in the City of Chula Vista Growth Management Ordinance (GMO) (Chapter 19.09 of the Chula Vista Municipal Code). The current traffic threshold is to maintain LOS "C" or better as measured by observed average travel speed on all signalized arterial segments; except, that during peak hours, a LOS "D" can occur for no more than two hours; or
- iii. Applicant shall construct the missing roadway links and receive a transportation development impact fee credit for those improvements as applicable; or
- iv. An alternative measure is selected by the City that is demonstrated to ensure that the applicable GMO quality of life thresholds are met for traffic.

**TCA-17** The proposed project shall be implemented, or phased, consistent with the development timeframe set forth in Project Description Table 4-3. In the event that project development substantially deviates from the phasing set forth in Table 4-3 (e.g., Village 3 being built first, followed by Village 8 East and then Village 10), the Applicant, or its designee, shall conduct additional environmental analysis consistent with the requirements of CEQA and as approved by the Development Services Director, or designee. Additional analysis may include a supplemental traffic study that analyzes the potential traffic circulation impacts associated with the phasing deviation, and identifies new circulation improvements or other mitigation measure(s), if needed.

## **V. POLICE**

### **V.1. Threshold Standard**

- A. Emergency Response: Properly equipped and staffed police units shall respond to 81% of “Priority One” emergency calls within 7 minutes and maintain an average response time to all “Priority One” emergency calls of 5.5 minutes or less.
- B. Urgent Response: Respond to 57% of “Priority Two” urgent calls within 7 minutes and maintain an average response time to all “Priority Two” calls of 7.5 minutes or less.

### **V.2. Service Analysis**

The City of Chula Vista Police Department provides police services. The purpose of the Threshold Standard is to maintain or improve the current level of police services throughout the City by ensuring that adequate levels of staff, equipment and training are provided. Police threshold performance was analyzed in the “Report on Police Threshold Performance 1990-1999”, completed April 13, 2000. In response to Police Department and GMOC concerns the City Council amended the Threshold Standards for Police Emergency Response on May 28, 2002, with adoption of Ordinance 2860. Police Facilities are also addressed in *A Master Plan for the Chula Vista Civic Center Solving City Space Needs Through Year 2010*, dated May 8, 1989.

### **V.3. Project Processing Requirements**

The PFFP is required by the Growth Management Program to address the following issues for Police Services.

- A. Services reviewed must be consistent with the proposed phasing of the project.
- B. Able to demonstrate conformance with *A Master Plan for the Chula Vista Civic Center* dated May 8, 1989, as amended.

### **V.4. Existing Conditions**

The Chula Vista Police Department (CVPD) provides law enforcement services to the area encompassing the project. The CVPD is located at 315 Fourth Avenue in Chula Vista. This facility is expected to be adequate through the build-out of eastern Chula Vista. The department also maintains a Community Storefront at 2015 Birch Road, which provides limited police services. Currently, CVPD maintains a staff of approximately 207 sworn officers and approximately 78 civilian support personnel. The Project is within Police Patrol Beat 24 that is served by at least one Beat Officer per shift.

### **V.5. Adequacy Analysis**

According to the GMOC 2013 Annual Report the response times for “Priority One” Calls for Service (CFS) were not met during the 2011-2012 time period (see Table D.1). The CVPD responded to 78.4 percent of Priority 1 “Emergency Response” calls within 7 minutes, which was 2.6 percent below the Threshold Standard of 81 percent, and 7.3 percent below the percentage reported for the previous year. The average response time, however, was within the Threshold Standard. With an average response time of 5 minutes and 1 second, the response time was 29 seconds better than the Threshold Standard requires, but 21 seconds longer than the previous year.

The department implemented a hybrid patrol schedule in 2013 that is expected to have a positive effect on response times. The 4/10-3/12 schedule adds more staffing on Friday through Sunday, when call-for-service volumes are highest. Officers work a 10-hour schedule from Monday through Thursday and a 12-hour schedule Friday through Sunday.

<b>Table D.1 Historic Response Times Priority I -- Emergency Response, Calls For Service</b>			
	<b>Call Volume</b>	<b>% of Call Response w/in 7 Minutes</b>	<b>Average Response Time</b>
<b>Threshold</b>		<b>81.0%</b>	<b>5:30</b>
FY 2011-12	726 of 64,386	78.4%	5:01
FY 2010-11	657 of 64,695	85.7%	4:40
FY 2009-10	673 of 68,145	85.1%	4:28
FY 2008-09	788 of 70,051	84.6%	4:26
FY 2007-08	1,006 of 74,192	87.9%	4:19
FY 2006-07	976 of 74,277	84.5%	4:59
FY2005-06	1,068 of 73,075	82.3%	4:51
FY2004-05	1,289 of 74,106	80.0%	5:11
FY2003-04	1,322 of 71,000	82.1%	4:52
FY 2002-03	1,424 of 71,268	80.8%	4:55
FY 2001-02	1,539 of 71,859	80.0%	5:07
FY 2000-01	1,734 of 73,977	79.7%	5:13
FY 1999-00	1,750 of 76,738	75.9%	5:21
CY 1999 <sup>2</sup>	11,890 of 74,405	70.9%	5:50

*Source: GMOC 2013 Annual Report*

The “Priority Two” CFS threshold during the same period was not met and has not been met for several years. For Priority Two CFS, the department responded to 49.8%, which was identical to the previous year’s percentage. The GMOC concluded that the Priority Two Urgent Response time Threshold Standard had not been met.

The original 1991 Urgent Response or Priority Two Threshold Standard was: Respond to 62% of calls within 7 minutes, maintaining an average of 7 minutes or less. In 1999, the City's Special Projects Division and the Police Department presented the GMOC with a report titled “Report on Police Threshold Performance 1990-1999.” The report indicated that, prior to implementation of the CAD system, human error occurred when measuring dispatch time. The report suggested that the Priority Two Threshold Standards should have been set at 57% of calls within 7 minutes, with an average response time of 7.5 minutes. Subsequently, the City Council approved the proposed change to the Threshold Standard in 2002, which is the standard currently in effect.

For the past 15 years, the Priority Two -Urgent Response Threshold Standard has not been met. The percentage of calls responded to within 7 minutes has dropped to 41.9 percent, which is 7.9 points lower than last year, putting it 15.1 points below the Threshold Standard of

<sup>2</sup> The FY98-99 GMOC Report used calendar 1999 data due to the implementation of the new CAD system in mid-1998.

57 percent (see Table D.2). This is the largest noncompliant gap since FY 2005-06, when 40 percent of the calls were responded to within 7 minutes. The 11 minutes and 54 seconds average response time for FY 2011-12 was 4 minutes and 24 seconds above the Threshold Standard, which was 1 minute and 48 seconds worse than last year and the worst time ever reported to the GMOC.

Part of the non-compliance problem may be the Threshold Standard itself. Previous GMOC annual reports have explained that the City's growth management staff and Police Department staff have determined the Priority Two Threshold Standard needs to be modified to more accurately report response times. According to the 2012 GMOC Annual Report, the Police Department had exhausted all resources with the goal of improving Priority Two response times; and without funding for additional staff, the Priority Two Threshold Standard will remain unmet in the foreseeable future.

Overall, the 2013 GMOC Annual Report indicates that the GMOC is concerned that the trend for both Priority One and Two is headed in the wrong direction, and will continue to monitor these closely in future reports.

The recommendation for a modified Threshold Standard will be the result of staff analyzing data and working with the Police Department during a comprehensive review of the Growth Management Program. The GMOC proposed changes to the Priority Two Threshold Standard when it presented the results of the comprehensive review to the City Council. The changes will clear up some confusing aspects of how response times are currently reported and establish a response goal that is reasonable and appropriate.

	Call Volume	% of Call Response within 7 Min.	Average Response Time*
<b>Threshold</b>		<b>57.0%</b>	<b>7:30</b>
FY 2011-12	22,121 of 64,386	41.9%	11:54
FY 2010-11	21,500 of 64,95	49.8%	10:06
FY 2009-10	22,240 of 68,145	49.8%	9:55
FY 2008-09	22,686 of 70,051	53.5%	9:16
FY 2007-08	23,955 of 74,192	53.1%	9:18
FY 2006-07	24,407 of 74,277	43.3%	11:18
FY 2005-06	24,876 of 73,075	40.0%	12:33
FY 2004-05	24,923 of 74,106	40.5%	11:40
FY 2003-04	24,741 of 71,000	48.4%	9:50
FY 2002-03	22,871 of 71,268	50.2%	9:24
FY 2001-02	22,199 of 71,859	45.6%	10:04
FY 2000-01	25,234 of 73,977	47.9%	9:38
FY 1999-00	23,898 of 76,738	46.4%	9:37
CY 1999	20,405 of 74,405	45.8%	9:35
FY 1997-98	22,342 of 69,196	52.9%	8:13
FY 1996-97	22,140 of 69,904	62.2%	6:50
FY 1995-96	21,743 of 71,197	64.5%	6:38

*Source: GMOC 2013 Annual Report*

The Priority Two Threshold Standard has been out of compliance for 15 consecutive years. The GMOC's 2013 Annual Report recommended that the City Council support the Police Chief's efforts to 1) increase staff to budget levels, and 2) effectively manage work schedules to improve response times.

Currently, the CVPD's staffing levels are not sufficient to meet the Threshold Standards. The CVPD does have adequate facilities to meet demands through buildout of the Chula Vista General Plan, including the project. In terms of the current staffing, any additional developments could potentially have a negative impact on police response times to the service area. The comprehensive use of advanced crime prevention through environmental design (CPTED) principles could help mitigate, to some extent, the impact on police services. In particular, completely controlling access to surface parking lots and structures would reduce vehicle crime in the proposed development area. Additionally, the use of construction materials and design approaches that reduce noise levels in residential units may also help mitigate the impact on police services.

#### IV.6. Financing Police Facilities

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2847. The PFDIF is adjusted every October 1<sup>st</sup> pursuant to Ordinance 3050, which was adopted by the City Council on November 7, 2006. The Police PDIF Fee for Single-Family Development is \$1,671 per unit and \$1,789/unit for Multi-Family Development (see Table B.5)<sup>3</sup>. The Police PFDIF for Commercial development is \$7,896 per acre and \$1,703 per acre for Industrial Development. This amount is subject to change as it is amended from time to time. The project will be subject to the payment of the fee at the rate in effect at the time building permits are issued. At the current fee rate, the project Police Fee obligation at build-out is \$2,886,077.

Development Phase	Dwelling Units		Com'l Acres	Industrial Acres	Police Fee				
	SF	MF			Single Family \$1,671/DU	Multi-Family \$1,805/DU	Com'l <sup>1</sup> \$7,896/Ac.	Ind. \$1,703/Ac.	Total Fee
Red	481	0	0.0	0.0	\$803,751	\$0	\$0	\$0	\$803,751
Blue	521	0	0.0	0.0	\$870,591	\$0	\$0	\$0	\$870,591
Yellow	0	0	0.0	28.5	\$0	\$0	\$0	\$48,536	\$48,536
Green	0	595	11.3	0.0	\$0	\$1,073,975	\$89,225	\$0	\$1,163,200
Purple	0	0	0.0	0.0	\$0	\$0	\$0	\$0	\$0
<b>Totals</b>	<b>1002</b>	<b>595</b>	<b>11.3</b>	<b>28.5</b>	<b>\$1,674,342</b>	<b>\$1,073,975</b>	<b>\$89,225</b>	<b>\$48,536</b>	<b>\$2,886,077</b>
	<b>1597</b>								

The PDIF Fee is subject to change as it is amended from time to time. Changes in the number of dwelling units, Industrial Acreage or Commercial Acreage may affect the estimated fee.

**Footnote:**  
<sup>1</sup> Office uses are treated as Commercial Uses for PDIF.

<sup>3</sup> Fee based on Form 5509 dated 11/07/2013. Actual fee may be different, please verify with the City of Chula Vista at the time of building permit.

The projected fee illustrated in Table D.3 is an estimate only. Actual fees may be different. PFDIF Fees are subject to change depending upon City Council actions and or Developer actions that change residential densities, industrial acreage or commercial acreages.

**V.7. Threshold Compliance:**

- A. Project compliance will be satisfied with the payment of Public Facilities Fees. The proposed project will be required to pay public facilities fees for police services, based on the number of dwelling units and commercial and industrial acreage, prior to the issuance of building permits; the fees shall be paid at the rate in effect at the time payment is made.

The project applicant shall comply with the Project EIR Public Services mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following PUB mitigation measures are from the EIR:

- B. (PUB-3) Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall pay the City's PFDIF in accordance with the fees in effect at the time of building permit issuance and phasing approved in this PFFP, unless stated otherwise in a separate development agreement.
- C. (PUB-4) The City of Chula Vista will continue to monitor the Chula Vista Police Department responses to emergency calls and report the results to the GMOC on an annual basis.
- D. (PUB -5) Prior to issuance of each building permit, site plans shall be reviewed by the Chula Vista Police Department or its designee to ensure the incorporation of Crime Prevention through Environmental Design Features (CPTED) features and other recommendations of the Chula Vista Police Department, including but not limited to, controlled access points to parking lots and buildings, maximizing visibility along building fronts, sidewalks and public parks, and providing adequate street, parking lot and parking structure visibility and lighting.

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## VI. FIRE AND EMERGENCY MEDICAL SERVICES

### VI.1. Threshold Standard

Emergency response: Properly equipped and staffed fire and medical units shall respond to calls throughout the City within seven (7) minutes in 80 percent of the cases.

### VI.2. Service Analysis

The City of Chula Vista Fire Department (CVFD) provides Fire and Emergency Medical Services (EMS). EMS is provided on a contract basis with American Medical Response (AMR). The City also has countywide mutual and automatic aid agreements with surrounding agencies, should the need arise for their assistance. The purpose of the Threshold Standard and the monitoring of response times are to maintain and improve the current level of fire protection EMS in the City. Fire/EMS facilities are provided for in the recently City Council Adopted (1/28/2014) Fire Facility, Equipment and Deployment Master Plan (FFMP). The FFMP indicates that the number and location of fire stations primarily determine response time. The FFMP evaluates the planning area's fire coverage needs, and recommends a twelve (12) station network at build out to maintain compliance with the Threshold Standard (see Table E.1).

### VI.3. Existing Conditions

There are currently nine (9) fire stations serving the City of Chula Vista. The existing station network is listed below:

<b>Table E.1</b>			
<b>Current Fire Station Facilities</b>			
<b>Station</b>	<b>Location</b>	<b>Equipment</b>	<b>Staffing</b>
<b>Current Fire Station Facilities</b>			
Station 1	447 F St.	Engine 51/Truck 51/Battalion 51	Assigned: 24 - On Duty: 8
Station 2	80 East J St.	Engine 52	Assigned: 9 - On Duty: 3
Station 3	1410 Brandywine Ave.	US&R <sup>4</sup> 53 + Tender & Trailer	Assigned: 12 - On Duty: 4
Station 4	850 Paseo Ranchero	Engine 54	Assigned: 9 On Duty: 3
Station 5	391 Oxford St.	Engine 55	Assigned: 9 On Duty: 3
Station 6	605 Mt. Miguel Rd.	Engine 56/Brush 56	Assigned: 9 On Duty: 3
Station 7	1640 Santa Venetia Rd.	Engine 57/Truck 57/Battalion 52	Assigned: 24 On Duty: 8
Station 8	1180 Woods Dr.	Engine 58	Assigned: 9 On Duty: 3
Station 9	291 E. Oneida Street	Engine 59	Assigned: 9 On Duty: 3
<b>Planned Fire Station Facilities</b>			
	EUC	New Engine/ New Truck	Unknown
	Bayfront	New Engine/ New Truck	Unknown
	Village 8 West	New Engine/ New Truck	Unknown

Source: CVFD

<sup>4</sup> National Urban Search and Rescue (US&R) Response System Team

The FFMP was adopted by the Chula Vista City Council on January 28, 2014. The FFMP sets forth a plan for a Fire/Emergency Medical Services delivery system within the City of Chula Vista that can, upon build-out, meet the expected growth of the City. The FFMP recommends the expansion of one existing fire station and the addition of three new fire stations for a total of 12 fire stations. The preparation of the FFMP anticipated the University Villages development including Village 3 North. Two of the new stations are within Otay Ranch, one in Village 8 West, the other in the EUC, which is consistent with the Otay Ranch GDP and EUC SPA Plan. Additionally, the third fire station would serve the Bayfront. All future growth projected in the City will be served by the station locations and configuration as outlined within the FFMP.

During the City's next comprehensive update of the PFDIF program, the level of capital program financial support required from both the General Fund and the PFDIF will be determined. The City's Public Facilities Development Impact Fee (PFDIF) program is the primary funding source for the one-time fire related facility capital expenditures; the General Fund is the funding source for the operating costs. Cost sharing between the City and the PFDIF will also be determined during the PFDIF update and the new aforementioned development related facilities will be added to the PFDIF program fee calculation.

American Medical Response (AMR) is contracted by the City of Chula Vista to provide Emergency Medical Services. There are four AMR units that provide paramedics to the City of Chula Vista exclusively. Currently two full-time units are stationed within the city limits and are dedicated to Chula Vista, while two other full-time units are shared with other cities. The Chula Vista Fire Department is also providing an Advance Life Support (ALS) program to provide residents with the most appropriate emergency medical care in a timely manner.

#### **VI.4. Adequacy Analysis**

The Village 3 North SPA Project is located within the City of Chula Vista. The nearest existing stations are Fire Stations 3 and 7, located approximately 2.9 and 3.6 miles from the furthest point in the project, respectively. Also Station 4 (3.7 miles away) could possibly respond. Planned fire stations include the EUC Fire Station, located 4.9 miles from the project area, and the Village 8 West station located approximately 3.5 miles from the project area.

The *Fire Protection Plan, University Villages – Village 3 North and portion of Village 4, July, 2014, by Dudek*, is referenced in this document as the Project FPP. The Project FPP determined the following call volumes for Station 7 from the Chula Vista Fire Department's 2010 Fire Facility/Deployment Master Plan: engine 57 (1,100 calls) and truck 57 (350 calls). These call volumes were used to calculate average daily call volume. Based on the total number of calls handled in 2009 by Station 7, the average daily call volume was calculated as 1) Station 7: engine 57 — 3.0 calls per day, and 2) truck 57 — 1.0 call per day.

Based on the CVFD estimate of 67 annual calls per 1,000 population (2009 data), the Project's estimated 5,174 residents and visitors would generate approximately 773 calls per year (about 2.1 calls per day), roughly 80% to 85% of which (1.8 calls per day) are expected to be medical emergencies, based on past call statistics (see Table E.2).

Table E.2 Village 3 North & portion of Village 4 Projected Call Volume			
Emergency Calls per 1,000	Estimated Population	Avg. No. Calls per Year (5174\1,000)x67	Avg. No. Calls per Day (347/365)
67	5174	347	.95
Type of call	Per capita call generation factor	Number of estimated annual calls	
Total Calls	100%	347	
Total Fires	1.2%	4.2	
Total EMS/Rescue Calls	85.9%	298.0	
Total Other Calls	12.9%	44.8	

Source: Project FPP

The Project FPP determined that based on the relatively low call volumes from the existing, nearby fire station, there is capacity to respond to a higher call volume. If based only on call volume, the existing stations would be able to respond to Village 3 North & portion of Village 4 call volume increases. However, response times and cumulative call volume increases in Chula Vista's developing areas must also be considered when determining whether existing resources are adequate, or whether additional resources are necessary. Longer response times to structural fire emergencies may be partially mitigated based on the mandate of interior sprinklers in all structures. Sprinklers extend the fire flashover time or extinguish most room fires, thus compensating for a longer response.

Table E.3 Village 3 North & portion of Village 4 Fire/EMS - Emergency Response Times Since 2000		
Years	Call Volume	% of All Call Response Within 7:00 Minutes
<b>Threshold</b>		<b>80.0%</b>
FY 2012	11,132	76.4%
FY 2011	9,916	78.1%
FY 2010	10,296	85.0%
FY 2009	9,363	84.0%
FY 2008	9,883	86.9%
FY 2007	10,020	88.1%
CY 2006	10,390	85.2%
CY 2005	9,907	81.6%
FY 2003-04	8,420	72.9%
FY 2002-03	8,088	75.5%
FY 2001-02	7,626	69.7%
FY 2000-01	7,128	80.8%

Source: GMOC 2013 Annual Report

Based on the GMOC 2013 Annual Report, the Fire/EMS response time Threshold Standard was not met for Fiscal Year 2012 (see Table E.3). The percentage of calls responded to within 7 minutes dropped approximately 2% between Fiscal Year 2011 (78.1%) and Fiscal Year 2012 (76.4%). This is down a total of 8.6% in the past two years, and 3.6% below the Threshold Standard of 80%. The CVFD explained that, during the reporting period, the call

volume increased by 1,493 calls (10% medical and 24% fire) while available resources, staffing and facilities remained the same, resulting in a higher demand on available resources, which made the standard more difficult to achieve. They also indicated that the aging fleet of fire apparatus, combined with a reduction in public works support staff (radio technicians and mechanics) also hampered their ability to meet the standards.

Regardless of the downturn in response times, the CVFD reported that the average response time for 80% of the calls actually improved by 47 seconds, due to the fact that the majority of the calls were on the west side of the City, where navigation through the roadways is easier. Response times in the west averaged 5.39 minutes; response times in the east averaged 6.48 minutes. The city street network pattern contributes to emergency response times. The City of Chula Vista west of I-805 has a grid street pattern that promotes accessibility and generally has good response times<sup>5</sup>. East of I-805 the street pattern is less of a grid, consisting of a hierarchy of streets, curvilinear street patterns and cul-de-sacs that can restrict accessibility and lower response times. To address the situation, the Fire Department is developing techniques and solutions that will improve response times.

**VI.5. Fire & EMS Facility Analysis:**

The CVFD has four fire stations west of Interstate 805 and 6 fire stations east of I-805. An additional station is planned as a part of the future Bayfront project, which is within western Chula Vista. New developments in the eastern portion of the city will provide improved street connectivity and an increased awareness for emergency vehicle access to improve response times. New fire apparatus is also necessary to accommodate new growth over the next five years.

<b>Table E.4                      Village 3 North &amp; portion of Village 4                      Fire/EMS - Emergency Response Times Comparison</b>		
<b>Years</b>	<b>Average Response Time for 80% of Calls</b>	<b>Average Travel Time</b>
FY 2012	5:59	3:41
FY 2011	6:46	3:41
FY 2010	5:09	3:40
FY 2009	4:46	3:33
FY 2008	6:31	3:17
FY 2007	6:24	3:30
CY 2006	6:43	3:36
CY 2005	7:05	3:31
FY 2003-04	7:38	3:32
FY 2002-03	7:35	3:43
FY 2001-02	7:53	3:39
FY 2000-01	7:02	3:18

*Source: GMOC 2013 Annual Report*

<sup>5</sup> Fire Marshall, City of Chula Vista, December 14, 2012.

Since March 2008, the City of Chula Vista has contracted with San Diego Dispatch to respond to fire and medical dispatch calls. The percentage of calls responded to within seven minutes is approximately consistent with response times prior to outsourcing, and at 76.4% is below the 80% Threshold Standard (see Table E.4).

The CVFD has requested that the City of Chula Vista use the National Fire Prevention Association (NFPA) standards for future GMOC reporting. The NFPA standards are used by fire departments to assess and report response and Effective Fire Force (EFF) statistics. Using this standard would measure the CVFD against the NFPA standard of 1 minute dispatch, 1 minute turnout and 4 minute travel time, and would provide a clearer picture of how CVFD and the dispatch center are doing each year.

**VI.6. Financing Fire & EMS Facilities:**

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2847. The PFDIF is adjusted every October 1<sup>st</sup> pursuant to Ordinance 3050, which was adopted by the City Council on November 7, 2006. The Fire PFDIF Fee for Single Family Development is \$1,393/unit and \$984/unit for Multi-Family Development (see Table A.7)<sup>6</sup>. The Fire PFDIF for Commercial development is \$3,681 per acre and \$731 per acre for Industrial development. This amount is subject to change as it is amended from time to time. The project will be subject to the payment of the fee at the rate in effect at the time building permits are issued. At the current fee rate, the project Fire Fee obligation at build-out is \$2,053,810.

**Table E.5  
Village 3 & a Portion of Village 4 SPA  
Public Facilities Fees For Fire**

Development Phase	Dwelling Units		Com'l Acres	Industrial Acres	Police Fee				
	SF	MF			Single Family \$1,393/DU	Multi-Family \$1,001/DU	Com'l <sup>1</sup> \$7,896/Ac.	Ind. \$1,703/Ac.	Total Fee
Red	481	0	0.0	0.0	\$670,033	\$0	\$0	\$0	\$670,033
Blue	521	0	0.0	0.0	\$725,753	\$0	\$0	\$0	\$725,753
Yellow	0	0	0.0	28.5	\$0	\$0	\$0	\$20,834	\$20,834
Green	0	595	11.3	0.0	\$0	\$595,595	\$41,595	\$0	\$637,190
Purple	0	0	0.0	0.0	\$0	\$0	\$0	\$0	\$0
<b>Totals</b>	<b>1002</b>	<b>595</b>	<b>11.3</b>	<b>28.5</b>	<b>\$1,395,786</b>	<b>\$595,595</b>	<b>\$41,595</b>	<b>\$20,834</b>	<b>\$2,053,810</b>
	<b>1597</b>								

The PDIF Fee is subject to change as it is amended from time to time. Changes in the number of dwelling units, Industrial Acreage or Commercial Acreage may affect the estimated fee.

**Footnote:**

<sup>1</sup> Office uses are treated as Commercial Uses for PDIF.

The projected fee illustrated in Table E.5 is an estimate only. PFDIF Fees are subject to change depending upon City Council actions and or Developer actions that change residential densities, industrial acreage or commercial acreages.

<sup>6</sup> Fee based on Form 5509 dated 11/07/2013. Actual fee may be different, Verify with the City of Chula Vista at the time of building permit.

**VI.7. Threshold Compliance:**

- A. Project compliance will be satisfied with the payment of Public Facilities Fees. The proposed project will be required to pay public facilities fees for fire services based on the number of dwelling units and commercial and industrial acreage, prior to the issuance of building permits; the fees shall be paid at the rate in effect at the time payment is made.

The project applicant shall comply with the Project EIR Public Services mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following Fire PUB mitigation measure is from the EIR:

- B. (PUB-1) Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall pay PFDIF in accordance with the fees in effect at the time of building permit issuance and phasing approved in this document, unless stated otherwise in a separate development agreement.

## **VII. SCHOOLS**

### **VII.1. Threshold Standard**

The City shall annually provide the two local school districts with a 12- to 18-month development forecast and request an evaluation of their ability to accommodate the forecast and continuing growth. The districts' replies should address the following:

- A. Amount of current capacity now used or committed.
- B. Ability to absorb forecasted growth in affected facilities.
- C. Evaluation of funding and site availability for projected new facilities.
- D. Other relevant information the district(s) desire(s) to communicate to the City and the GMOC.

### **VII.2. Service Analysis**

School facilities and services in Chula Vista are provided by two school districts. The Chula Vista Elementary School District (CVESD) administers education for kindergarten through sixth grades. The Sweetwater Union High School District (SUHSD) administers education for the Junior/Middle and Senior High Schools of a large district, which includes the City of Chula Vista. The purpose of the 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., currently at \$2.24 per square foot for new residential construction and \$0.36 per square foot for new commercial and industrial construction).

CVESD utilizes their current *Fee Justification Report, June 2012, by SDFEA*, 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 \$3.20 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 \$1.41 per square foot and SUHSD collects \$1.79 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 22 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.

### **VII.3. Project Processing Requirements**

The PFFP is required by the Growth Management Program to address the following issues for School Services:

- A. Identify student generation by phase of development.
- B. Specific siting of proposed school facilities will take place in conformance with the *Sweetwater Union High School District Long Range Comprehensive Plan*, November 1989 and Chula Vista Elementary School District's Standards and Criteria.
- C. Reserve school sites, if necessary, or coordinate with the district for additional school classrooms.
- D. Identify facilities consistent with proposed phasing.
- E. Demonstrate the ability to provide adequate facilities to access public schools in conjunction with the construction of water and sewer facilities.
- F. Enter into School Mitigation Agreements.

### **VII.4, Existing Conditions**

#### **School Facilities Inventory, 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 29,000 students in 45 elementary schools (including Charter Schools) with approximately 2,500 employees (both certified and classified) districtwide. Table F.1 lists existing schools together with the capacity and enrollment of each. Capacity using existing facilities is approximately 31,000. Enrollment is currently approximately 28,890. Ten of the 45 schools are over capacity and three schools are near capacity (see Table F.1). A new K-6 school opened in Otay Ranch Village 11 in July 2013. With the addition of this school, the CVESD expects to have adequate capacity to house all projected students for the next 18 months. However, additional facilities may be necessary with the next five years.

Currently, several schools in eastern Chula Vista are over capacity, including Arroyo Vista, Hedenkamp, Veterans, McMillin, Wolf Canyon, and Salt Creek. The Learning Community and Mueller Elementary in western Chula Vista is also over capacity and is projected to be nearly 150 over capacity within five years.

**Table F.1  
Chula Vista Elementary School District - Enrollments vs. Capacity**

<b>Schools</b>	<b>Estimated Enrollment 12/2013</b>	<b>Approximate Capacity</b>	<b>Remaining Capacity</b>
Allen/Ann Daly	431	565	134
Arroyo Vista Charter	1,034	850	-184
Camarena	944	900	-44
Casillas	595	739	144
Castle Park	421	539	118
Chula Vista Hills	559	588	29
Chula Vista LCC	800	725	-75
Clear View Charter	519	593	74
Cook	449	538	89
Discovery Charter	855	950	95
EastLake	633	763	130
Feaster/Ed Charter	1,111	1,164	53
Finney	406	622	216
Halecrest	503	601	98
Harborside	625	914	289
Hedenkamp	1,070	1,045	-25
Heritage	912	863	-49
Hilltop Drive	574	588	14
Juarez-Lincoln	592	776	184
Kellogg	318	539	221
Lauderbach	827	965	138
Liberty	728	748	20
Loma Verde	552	650	98
Los Altos	395	526	131
Marshall	724	734	10
McMillin	856	850	-6
Montgomery	358	526	168
Mueller Charter	1,051	900	-151
Olympic View	851	825	-26
Otay	607	775	168
Palomar	393	468	75
Parkview	364	583	219
Rice	691	741	50
Rogers	472	660	188
Rohr	349	489	140
Rosebank	605	764	159
Salt Creek	1,025	950	-75
Silver Wing	405	638	233
Sunnyside	447	564	117
Tiffany	586	689	103
Valle Lindo	528	714	186
Valley Vista	561	688	127
Veterans	888	850	-38
Vista Square	631	751	120
Wolf Canyon	645	849	204
<b>Totals</b>	<b>28,890</b>	<b>32,759</b>	<b>3,869</b>
District Adjustments		<b>30,984</b>	<b>2,094</b>

*Source: CVESD*

**Table F.2  
Sweetwater Union High School District  
Enrollments vs. Capacity 2013-2014**

<b>School Site</b>	<b>Program Capacity 100%</b>	<b>Estimated Enrollment</b>	<b>Capacity vs. Projected</b>
<b>Middle Schools</b>			
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
<b>Subtotal</b>	<b>18,313</b>	<b>11,471</b>	<b>6,842</b>
<b>High Schools</b>			
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
<b>Subtotal</b>	<b>35,211</b>	<b>25,985</b>	<b>9,226</b>
<b>Total</b>	<b>53,524</b>	<b>37,456</b>	<b>16,068</b>

\* Combined Jr. High & High School

Source: SUHSD

**School Facilities Inventory, Sweetwater Union High School District**

The District serves nearly 40,000 students in 11 middle (7-8) and 14<sup>7</sup> high schools (grades 9–12). Several middle and high schools are planned or have been recently opened in the area. Otay Ranch High School is the nearest high school to Village 3 North; however, the project area is outside the designated attendance area. Unless the attendance boundary is changed high school students from Village 3 North will attend Olympian High School, which was opened in 2006 within Otay Ranch Village 7, and has a planned capacity of 2,600 students. A new 7–12 school is planned within Otay Ranch Village 11. However, there is no construction schedule available.

The SUHSD has indicated that the unstable economy, high foreclosure rate, and expansion of charter schools into the 7-12 arena make the 5-year projections for eastern Chula Vista very tentative. If charter schools continue to siphon students, it is likely that the District will have capacity for five years of residential growth. However, if there is a significant increase in development and reoccupation of foreclosed homes, construction of Middle School No. 12 and High School No. 14 in Village 11 may be necessary within the next 5 years. Construction is anticipated to occur within 2-3 years.

**VII.5. School Sizing and Location**

The project is proposed to consist of 1,597 dwelling units at build out. At completion, the proposed project could generate approximately 1,064 students using the following Student Generation Factors:

	<b><u>Single Family Detached</u></b>	<b><u>Multi-Family Attached</u></b> <sup>8</sup>
Elementary (K-6) =	.4114 <sup>9</sup> students/dwelling unit	.3481 students/d.u.
Middle School (7-8) =	.1216 students/dwelling unit	.0516 students/d.u.
High School (9-12) =	.2291 students/dwelling unit	.1057 students/d.u.

By phase and school category, the project is expected to generate the following students:

<b>Table F.3</b>										
<b>Village 3 North &amp; portion of 4 SPA</b>										
<b>Student Generation By Development Phase</b>										
<b>Phase</b>	<b>Dwelling Units</b>		<b>Student Generation</b>							
			<b>Elementary (K-6)</b>		<b>Middle (7-8)</b>		<b>High School (9-12)</b>		<b>Total Students</b>	
	<b>SF</b>	<b>MF</b>	<b>SF</b>	<b>MF</b>	<b>SF</b>	<b>MF</b>	<b>SF</b>	<b>MF</b>	<b>SF</b>	<b>MF</b>
Red	481	0	198	0	58	0	110	0	367	0
Blue	521	0	214	0	63	2	119	0	397	0
Yellow	0	0	0	0	0	0	0	0	0	0
Green	0	595	0	207	0	31	0	63	0	301
Purple	0	0	0	0	0	0	0	0	0	0
<b>Subtotal</b>	<b>1002</b>	<b>595</b>	<b>412</b>	<b>207</b>	<b>122</b>	<b>31</b>	<b>229</b>	<b>63</b>	<b>764</b>	<b>301</b>
<b>Total</b>	<b>1597</b>		<b>619</b>		<b>153</b>		<b>292</b>		<b>1064</b>	

<sup>7</sup> East Hills Academy is a grades 7-12 school.

<sup>8</sup> Includes Single Family Attached and Apartment units.

<sup>9</sup> Rate from CVESD.

<b>Typical School Size Standards:</b>	Elementary	750-1000 students
	Middle	1,500 students
	Senior High	2,400 students

**Chula Vista Elementary School District**

There are seven CVESD elementary schools serving Otay Ranch students. These include Heritage Elementary, McMillin Elementary, Hedencamp Elementary, Veterans Elementary, Wolf Canyon Elementary and Camarena Elementary. The newest K–6 school in Otay Ranch Village 11 (Enrique S. Camarena Elementary School) opened in July 2013. These schools are currently operating at or over capacity. An additional elementary school was planned to commence construction in 2011 within Village 2. However, the Village 2 elementary school is on hold and no construction update is available.

The Village 3 North & Portion of 4 SPA Plan Site Utilization Plan identifies an 8.3-acre elementary school site within the Village core. As noted in Table F.3, the build-out of the SPA Plan area would generate the need to house approximately 619 elementary school age students. Generally, CVESD prefers to construct elementary schools that serve approximately 750 students. The Village 3 North site would be reserved for acquisition by the school district or dedication by the developer to the school district, pursuant to an agreement between the developer and CVESD. Construction timing of the school would be determined by the school district. Until new schools are constructed, students residing within the project area would attend existing schools in neighboring villages as determined by the school district.

The State Department of Education must approve a proposed elementary school site prior to district acceptance. Due to the tremendous growth and enrollment in the CVESD, the districts may retain the 8.3-acre site as identified in the SPA Plan. However, should the site be determined at a later date to be excess property for the purposes of a new school, the district will notify appropriate parties at that time.

In the event that schools are overcapacity, the school district uses relocateable classrooms to temporarily house additional students until a new facility opens. In recognition of the impact on school facilities created by new development, the District and developers may enter into various mitigation agreements in order to ensure the timely construction of school facilities to house students from new residential development (“Mitigated Agreement”). Historically, developers and school districts have entered into School Mitigation Agreements and community facilities district (“CFD”), pursuant to the Mello-Roos Community Facilities District Act of 1982 (CVESD), to finance school facilities. However, per AB 2926, in the 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.

**Sweetwater Union High School District**

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 F.2. It is anticipated that the 153 middle school students generated by the project will be served at EastLake Middle School or Rancho Del Rey Middle School until the first Otay Ranch middle school is constructed. EastLake Middle School is located approximately four miles to the northeast and Rancho Del Rey Middle School is located approximately two miles to the north. The Otay Ranch GDP School Facility Implementation Plan is based on the premise that schools will be constructed when half of the school's projected students reside in the community. The maximum middle school

capacity is 1,500 students, which would indicate a school construction trigger of approximately 750 students. However, throughout the district middle school capacity is available. Additional middle schools will be constructed when overall demand begins to approach existing capacity. Currently, the Otay Ranch Village 11 SPA has a designated Middle-High School site and the recently approved Village 8 West has a designated site for a Middle School.

The maximum capacity of a high school is approximately 2,400 students. It is anticipated that the 292 students generated from Village 3 North SPA Plan will be served at Olympian High School, which is located approximately two miles to the east. Depending on actual build-out and the capacity of existing area schools, it may be necessary to construct the planned high school within Village 11 prior to build-out of the project.

Demand for adult school facilities will be satisfied within existing facilities in the Sweetwater Union High School District, until a new facility can be constructed in the Eastern Urban Center (EUC) or a site reserved pursuant to the Otay Ranch GDP.

**VII.6. 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 Mello-Roos Districts have been established 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)

**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 (Brookfield/Shea)
- CFD No. 15 Otay Ranch Village 6 (ORC)

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 \$38,500 per student (2010 dollars). Excluding land, the cost for a high school is approximately \$32,000 per student. The cost for a middle school, including land acquisition, is approximately \$36,000 per student (2010 dollars). Excluding land, the cost for a middle school is \$32,000 per student. The cost for an elementary school, including land acquisition, is approximately \$33,500 per student (2010 dollars). Excluding

the land, the cost for an elementary school is approximately \$30,000 per student. Land acquisition cost is calculated at approximately \$350,000/net usable acre (10 acre elementary school site). Using the aforementioned costs per student together with the school size, the following costs per facility can be anticipated.

**Elementary School Cost**

(1000 students) (\$30,000/student w/o land cost)	\$30,000,000
(1000 students) (\$33,500/student w/land cost)	\$33,500,000

**Middle School Cost**

(1,500 students) (\$32,000/student w/o land cost)	\$48,000,000
(1,500 students) (\$36,000/student w/ land cost)	\$54,000,000

**High School Cost**

(2,400 students) (\$32,000/student w/o land cost)	\$80,000,000
(2,400 students) (\$38,500/student w/ land cost)	\$92,500,000

**VII.7. Threshold Compliance**

The project applicant shall comply with the Project EIR Public Services mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following School PUB mitigation measures are from the EIR:

- A. (PUB-6) Prior to the issuance of each building permit for any residential dwelling units, the applicant(s) shall provide evidence or certification by the CVESD that any fee charge, dedication or other requirement levied by the school district 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.
- B. (PUB-7) The Applicant shall provide the City with evidence from the CVESD that the Village 3 North school site has been determined by the district to be acceptable for school use, to the satisfaction of the Director of Developer Services.

## VIII. LIBRARIES

### VIII.1. Threshold Standard

Population Ratio: 500 square feet (gross) of adequately equipped and staffed library facility per 1,000 population. The city shall construct, 60,000 Gross Square Feet (GSF) of additional library space over the citywide June 30, 2000 GSF total, in the area east of Interstate 805 by build out. The construction of said facilities shall be phased such that the city will not fall below the citywide ratio of 500 GSF per 1,000 population. Library facilities are to be adequately equipped and staffed.

### VIII.2. Service Analysis

The City of Chula Vista Library Department provides library facilities.

### VIII.3. Project Processing Requirements

The PFFP is required by the Growth Management Program to address the following issues for Library services:

- A. Identify phased demands in conjunction with the construction of streets, water and sewer facilities.
- B. Specifically identify facility sites in conformance with the Chula Vista Library Master Plan.

### VIII.4. Existing Conditions

The City provides library services through the Civic Center Branch Library, the South Chula Vista Branch Library and, Otay Ranch Town Center Branch Library. The Civic Center Branch Library is located at 365 F Street, approximately 7 miles from the project and is the largest library facility within the city, consisting of a two-story, 55,000-square-foot building. The South Chula Vista Branch Library is located at 389 Orange Avenue, approximately five miles from the project and consists of approximately 37,000 square feet. The Otay Ranch Branch Library is located at 2015 Birch Road in the Otay Ranch Town Center, approximately one mile from the project and consists of approximately 3,400 square feet. The existing and future libraries are listed on the Table G.1 and Table G.2, respectively.

<b>Existing Libraries</b>	<b>Square Footage</b>
Civic Center	55,000
South Chula Vista	37,000
Otay Ranch Town Center	3,400
<b>Total Existing Square Feet</b>	<b>95,400</b>

The draft Chula Vista Public Library Strategic Facilities Plan identified ways to improve library service delivery to the community, particularly to residents of eastern Chula Vista. The plan indicates that the additional needed library square footage can be developed as multiple smaller branches, or as one large library. However, the library's operating budget has been significantly reduced and capital funding is not currently available. Therefore, the

facilities plan does not determine which option would be implemented. The options will be evaluated when capital and operating funds become available. Additional measures such as mall outlets, book vending machines, a bookmobile, and service partnerships are identified as possible interim measures. One recent interim measure was the mall branch at Otay Ranch Town Center, which opened in April 2012.

### **VIII.5. Adequacy Analysis**

Using the Threshold Standard of 500 square feet of library space per 1,000 population, the demand for library space based on Chula Vista's estimated population of 251,560<sup>10</sup> as of January 2013 is approximately 125,780 square feet. Chula Vista currently provides 95,400 square feet of library space. This represents an approximate 30,380 square-foot deficit. The demand generated by the 10,115 forecasted dwelling units (GMOC 2013 Annual Report) is 16,235 square feet ( $10,115 \times 3.21^{11}/1,000 \times 500$ ). By 2018 the demand for library space generated by the existing and forecasted dwelling units totals approximately 142,000 (125,780 + 16,235) square feet. Comparing this demand to the existing library square footage of 95,400 square feet results in a deficit of approximately 46,600 square-feet unless the city completes the Rancho Del Rey or EUC Regional Library or a combination of a Regional Library and numerous branch libraries before 2018. Table G.2 illustrates the need to increase Library Facilities over the next five years to keep pace with the city's projected growth. The SANDAG 2030 build-out population for Chula Vista is approximately 289,044. This population will require approximately 144,500 square feet of Library Facilities.

The GMOC Threshold Standard for libraries is 500 square feet of library space per 1,000 residents. According to the 2013 GMOC Annual Report, the current service ratio for FY 2011 was 383 square feet for every 1,000 residents, after the opening of the Town Center Branch Library in April 2012. Therefore, the City does not currently meet the GMOC Threshold for libraries.

The proposed Village 3 & a portion of 4 SPA Plan project would result in demand for libraries and may have the potential to require the construction of new or expanded library facilities. The project would generate demand for approximately 2,587 square-feet of additional library facilities within the City. While the SPA Plan permits public/quasi-public uses such as libraries, within the SPA Plan, the proposed project does not specifically include the development of a library. Future library facilities would be funded in part by payment of the PFDIF.

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<sup>10</sup> GMOC 2013 Annual Report

<sup>11</sup> Population coefficient of 3.21 persons per household.

<b>Table G.2</b>				
<b>Otay Ranch Village 3 North &amp; Portion of 4 SPA Plan</b>				
<b>Library Space Demand vs. Supply<sup>12</sup></b>				
	<b>Population</b>	<b>Demand Square Footage</b>	<b>Estimated Supply Square Footage</b>	<b>Above/(Below) Standard</b>
Estimated Existing Citywide 01/2013	251,560	125,780	95,400	(30,380)
1 <sup>st</sup> regional library (Rancho del Rey) 2018			26,400	(3,980)
2 <sup>nd</sup> regional library (EUC) 2018			23,600	19,620
Forecasted Projects to 2018 (10,115 x 3.21)	32,470	16,235		3,385
<b>Subtotal</b>	<b>284,030</b>	<b>142,015</b>	<b>145,400</b>	<b>3,385</b>

#### VIII.6. Financing Library Facilities

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2847. The PFDIF is adjusted every October 1<sup>st</sup> pursuant to Ordinance 3050, which was adopted by the City Council on November 7, 2006. The current PFDIF for single-family residential and multi-family development is \$1,582/unit. This amount is subject to change with the adoption of Ordinance 3010. The PFDIF amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the project. The calculations of the PFDIF due for each facility are addressed in the following sections of this report. At the current library fee rate, the Otay Ranch Village 3 & Portion of 4 SPA Library Fee obligation at build-out is \$2,526,454 (see Table G.3).

<b>Table G.3</b>					
<b>Village 3 North &amp; portion of 4 SPA Plan</b>					
<b>Public Facilities Fees For Libraries<sup>13</sup></b>					
<b>Development Phase</b>	<b>Dwelling Units</b>		<b>Library Fee</b>		
	<b>SF</b>	<b>MF</b>	<b>SF \$1,582/DU</b>	<b>MF \$1,582/DU</b>	<b>Total Fee</b>
Red	477	0	\$760,942	\$0	\$760,942
Blue	521	0	\$824,222	\$0	\$824,222
Yellow	0	0	\$0	\$0	\$0
Green	0	595	\$0	\$941,290	\$941,290
Purple	0	0	\$0	\$0	\$0
<b>Total</b>	<b>1002</b>	<b>595</b>	<b>\$1,585,164</b>	<b>\$941,290</b>	<b>\$2,526,454</b>
	<b>1597</b>				

<sup>12</sup> Based on City of Chula Vista Estimates, 2013 GMOC Annual Report.

<sup>13</sup> The PDIF Fee is subject to change as it is amended from time to time. Changes in the number of dwelling units may affect the estimated fee.

The projected fee illustrated in Table G.3 is an estimate only. Actual fees may be different. PDIF Fees are subject to change depending upon City Council actions and or Developer actions that change residential densities.

**VIII.7. Threshold Compliance**

- A. Project compliance will be satisfied with the payment of Public Facilities Fees. The proposed project will be required to pay public facilities fees for Library services, based on the number of dwelling units, prior to the issuance of building permits; the fees shall be paid at the rate in effect at the time payment is made.

The project applicant shall comply with the Project EIR Public Services mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following is a summary of these mitigation measures:

- B. (PUB-11) Prior to the issuance of each building permit for any residential dwelling units, the applicant shall pay the required PFDIF in accordance with the fees in effect at the time of building permit issuance and phasing approved. Payment of the PFDIF would represent the project's fair share contribution to meet the City's Threshold Standard for library space.
- C. (PUB-12) The City of Chula Vista shall continue to monitor library facilities and services and report the results to the GMOC on an annual basis.

## **IX. PARKS, TRAILS AND OPEN SPACE**

### **IX.1. Park Threshold Standard**

Population Ratio: Three (3) acres of neighborhood and community park land with appropriate facilities per 1,000 residents east of I-805.

### **IX.2. Service Analysis**

The City of Chula Vista provides public park and recreational facilities and programs through the Public Works and Recreation Departments, which are responsible for the acquisition and development of parkland. All park development plans are reviewed by City staff and presented to the Parks and Recreation Commission for review. A recommendation is made by this Commission to the City Council.

The Otay Ranch Parks and Recreation Facility Implementation Plan was adopted by the City Council on October 28, 1993. This plan identifies the parks facility improvement standards for the Otay Ranch.

The Village 3 North and portion of Village 4 SPA Plan must conform to the 2012 Chula Vista Parks and Recreation Master Plan, which provides the guidance for planning, siting and implementation of neighborhood and community parks. Further, the SPA Plan must conform to the City of Chula Vista Greenbelt Master Plan and the Otay Valley Regional Park Concept Plan.

### **IX.3. Project Processing Requirements**

- A. Identify phased demands in conformance with the number of dwelling unit's constructed, street improvements, and in coordination with the construction of water and sewer facilities.
- B. Specific siting of the facility will take place in conformance with the Chula Vista Parks and Recreation Master Plan.
- C. Site/s reserved for park purposes within the project.

### **IX.4. Existing Conditions**

The existing and future parks as depicted in the Public Facilities & Services Element of the General Plan and as updated by the inclusion of more recent information are contained in the City's Parks and Recreation Master Plan.

**IX.5. Project Park Requirements**

The project generates an estimated population of 5,174 (1,597 dwelling units x 3.24<sup>14</sup> population factor). To meet the City Growth Management Program’s Threshold Standard requirements, the amount of parkland dedicated is based on a standard of 3 acres per 1,000 populations (see Table H.1). The standard is based on State of California Government Code 66477, also known as the Quimby Act, which allows a city to require by ordinance, the dedication of land or payment of fees for park or recreational purposes.

<b>Table H.1 Quimby Act Parkland Requirements</b>		
<b>Village 3 North &amp; portion of 4 SPA Population</b>	<b>Standard</b>	<b>Parkland Acres Required</b>
5,174	3 acres per 1,000 population	15.5

All new development in the City of Chula Vista is subject to the requirements contained in the City's Parkland Dedication Ordinance CVMC Chapter 17.10. The ordinance establishes fees for park land acquisition and development, sets standards for dedication and establishes criteria for acceptance of parks and open space by the City of Chula Vista. Fees vary depending upon the type of dwelling unit that is proposed. There are four types of housing; Single-Family dwelling units (defined as all types of single-family detached housing and condominiums), Multi-Family dwelling units (defined as all types of attached housing including townhouses, attached condominiums, duplexes, and Mobile Homes). Single-Family Housing is defined as a free-standing structure with one residential unit. Multi-Family Housing is defined as any free-standing structure that contains two or more residential units. Parkland dedication requirements are shown below on Table H.2.

<b>Table H.2 City of Chula Vista Parkland Dedication Ordinance Standards</b>		
<b>Dwelling Unit Type</b>	<b>Land Dedication per Unit</b>	<b>Dwelling Units per Park Acre</b>
Single-Family	460 sf/du	95 du/ac.
Multi-Family	341 sf/du	128 du/ac.

<sup>14</sup> Provided by the Chula Vista Planning Department.

<b>Table H.3</b>			
<b>Village 3 &amp; portion of Village 4 SPA Plan</b>			
<b>Preliminary Parkland Dedication Requirements</b>			
<b>City Ordinance Applied to Planning Prediction of Unit Numbers and Types</b>			
<b>Dwelling Unit Type*</b>	<b>Number of D.U.</b>	<b>Parkland Required/DU</b>	<b>Required Acres</b>
Single Family Detached	1,002	460 sf/du	10.58
Multiple Family	595	341 sf/du	4.66
<b>TOTALS</b>	<b>1,597</b>		<b>15.24</b>
* Dwelling unit type - Note that number and type of units listed reflect 'Land Use Designations' listed in the Otay Ranch General Development Plan, since this level of information is all that is available at the time of this document's preparation irrespective of underlying zoning district. Actual fee obligation calculation to be based on implementing ordinance definition of dwelling unit type irrespective of underlying zoning district containing said dwelling unit. Definitions of dwelling unit types used for calculating park obligations are based upon from the City's Parkland Dedication Ordinance CVMC chapter 17.10. These definitions differ from the way unit types are defined from a planning, land-use and zoning perspective that uses unit density per acre to categorize the type of unit. CVMC chapter 17.10 uses product type to categorize the type of unit distinguishing between attached and detached units. Consequently, the figures in this chart are preliminary estimates, and shall be recalculated at the time when the obligations are due as determined by chapter 17.10 of the CVMC.			

The City's Parklands and Public Facilities Ordinance (CVMC 17.10) is based on the Quimby Act. Based on the City's Parklands and Public Facilities Ordinance, the parkland requirement is approximately 15.26 acres (see Table H.3).

<b>Table H.4</b>				
<b>Otay Ranch Village 3 North &amp; Portion of Village 4 SPA Plan</b>				
<b>Park Acres And Eligible Credits<sup>15</sup></b>				
<b>Park Identification</b>	<b>Net Acreage</b>	<b>Phase</b>	<b>Proposed Credit %</b>	<b>Eligible Credit Ac.</b>
P-1 – Neighborhood Park	6.7	Green	100%	6.7
P-2 – Community Park	15.6	Purple <sup>16</sup>	100%	15.6
Private Open Space - 1	0.2	Red	100%	0.0
Private Open Space – 2-8	2.2	Blue	100%	0.0
<b>Total Acres Eligible for Credit Against PAD</b>				<b>22.3<sup>17</sup></b>
<b>Villages 3 North, Portion of Village 4 SPA PAD Requirements</b>				<b>15.24</b>
<b>Subtotal Villages 3 North, Portion of Village 4 SPA Credits</b>				<b>7.06</b>
<b>Total Excess Credits</b>				<b>7.06</b>

The project phasing (Table B.3) and Site Utilization Plan identifies the park designations and acreage that are also shown in Table H.4. Table H.4 also identifies the phase of development in

<sup>15</sup> Parkland fee and acreage obligations are subject to change pending changes in the dwelling unit types and numbers, or clarification of unit type at the time when obligations are due.

<sup>16</sup> Community Park site IOD to be delivered to the city to recordation of the first Final Map.

<sup>17</sup> Either the Village 4 - 15.6 acre (net) P-2 Community Park or the 40 acre (net) Village 8 East P-2 Community Park may be utilized to satisfy the Village 3 North park obligations not met within the Village 3 North P-1 Neighborhood Park.

which the park will be constructed and the park acres that the city has determined will be given credit for purposes of satisfying the project's parkland dedication as measured against the City's Parkland Dedication Ordinance. The Neighborhood Park will be graded and offered for dedication in whatever development phase is initiated by the project developers. The City's Parkland Dedication Ordinance requirements for the project are outlined in Table H.4.

**IX.6. Park Adequacy Analysis**

Table H.5 is a comparison of park acreage demands and supply east of Interstate 805 for existing, approved projects, as well as the phased addition of the project. A review of the existing and approved park demands for Chula Vista east of I-805 including the project indicates a projected 2017 demand of approximately 486.16 acres of Neighborhood and Community Park (GMOC 2013 Annual Report). The 2017 projected supply of park acreage east of I-805, 426.88 acres, is approximately 59.28 acres less than the projected demand. The projected shortfall does not include the park obligations of the University Villages Project, which includes Village 3 North, Village 8 East and Village 10. These villages include approximately 76 acres of new parkland.

<b>Table H.5 Estimated Park Acreage Demand Compared to Supply East of Interstate 805</b>					
	<b>Population East of I-805<sup>18</sup></b>	<b>Demand Park Acres<sup>19</sup></b>	<b>Existing Park Acres</b>	<b>Eligible Credit Acres</b>	<b>Net Acres +/-Standard</b>
Existing	135,205	405.62	418.01 <sup>20</sup>	418.01	+12.39
Forecasted Projects 2013 to 2017	26,845 <sup>21</sup>	80.54	8.87 <sup>22</sup>	8.87	-71.67
<b>Total</b>	<b>162,050</b>	<b>486.16</b>	<b>426.88</b>	<b>426.88</b>	<b>+59.28</b>

The proposed development of the project requires per the Quimby Act approximately 15.5 acres (see Table H.1) for public parkland. The project SPA plan identifies 22.3 acres net for public Neighborhood Park and Community Park land. The Village 3 North Neighborhood Park (P-1) is 6.7 net acres. The Village 4 Community Park (P-2) is 15.6 net acres. The SPA Plan provides each of the proposed park facility details. Park phasing will be determined by the Director of Development Services. Once the SPA parkland obligation is met approximately 7.06 acres of community parkland would be available for credit to the project developer.

The Village 3 North & portion of Village 4 SPA Plan provides a 6.7-acre (net) Neighborhood Park (P-1) and 15.6 acres (net) of Community Park (P-2) within Village 4. The total parkland in the SPA Plan area is 22.3 (net) acres. Further, the University Villages Project includes the 40.0 acre (net) Village 8 East P-2 Community Park. Either the Village 4 - 15.6 acre (net) P-2 Community Park or the 40 acre (net) Village 8 East P-2 Community Park may be utilized to satisfy the Village 3 North park obligations not met within the Village 3 North P-1 Neighborhood Park. The actual park acreage requirements will be based on the number and type of residential units approved on the subsequent Final Map(s) for Village 3 North and a portion of Village 4.

<sup>18</sup> Population figures are from the 2013 GMOC Annual Report.

<sup>19</sup> Based on City Threshold requirement of 3 acres of neighborhood and community parkland per 1,000 residents east of I-805.

<sup>20</sup> Existing Park Acreage from 2013 GMOC Annual Report.

<sup>21</sup> Population figure derived from the Table B.1.

<sup>22</sup> Park acreage from Park Acreage Table from the 2013 GMOC Annual Report, Appendix B, Workshop Reports.

Table H.6 Otay Ranch Village 3 & a Portion of Village 4 SPA Park Supply by Phase							
Phase	Dwelling Unit Type*		Demand Park Acres	Supply Park Acres Net	Eligible Credit Acres	Net Acres +/- Standard	Project Cumulative
	SF	MF					
Red	481	0	5.08	0.00	0.00	-5.08	-5.08
Blue	521	0	5.50	0.00	0.00	-5.50	-10.58
Yellow	0	0	0.00	0.00	0.00	0.00	-10.58
Green	0	595	4.66	6.70	6.70	-2.04	-8.54
Purple	0	0	0	15.60	15.60	15.60	7.06
<b>Subtotal</b>	<b>1002</b>	<b>595</b>	<b>15.24</b>	<b>22.30</b>	<b>22.30</b>	<b>7.06</b>	<b>7.06</b>
<b>Total</b>	<b>1597</b>		<b>15.24</b>	<b>22.30</b>	<b>22.30</b>	<b>7.06</b>	<b>7.06</b>

\* Dwelling unit type - Note that number and type of units listed reflect 'Land Use Designations' listed in the Otay Ranch General Development Plan, since this level of information is all that is available at the time of this document's preparation irrespective of underlying zoning district. Actual fee obligation calculation to be based on implementing ordinance definition of dwelling unit type irrespective of underlying zoning district containing said dwelling unit. Definitions of dwelling unit type used for calculating park obligations are based upon from the City's Parkland Dedication Ordinance CVMC chapter 17.10. These definitions differ from the way unit types are defined from a planning, land-use and zoning perspective that uses unit density per acre to categorize the type of unit. CVMC chapter 17.10 uses product type to categorize the type of unit distinguishing between attached and detached units. Consequently, the figures in this chart are preliminary estimates, and shall be recalculated at the time when the obligations are due as determined by chapter 17.10 of the CVMC.

## IX.7. Open Space, Trails and Recreation

### A. Open Space

The Otay Ranch GDP requires the provision of open space in addition to local parks at a ratio of 12 acres for every 1,000 residents. Based on an estimated population of 5,174 residents, approximately 62.1 acres of open space is required. This requirement is met through the provision of approximately 193.2 acres of open space in the form of preserve open space, non-preserve open space, manufactured slopes and other interior open spaces within the SPA Plan area.

Natural open space within the SPA Plan area is comprised of Otay River Valley and Wolf Canyon open space (part of the Otay Ranch Preserve) to the south, graded slopes within and surrounding the village, a Neighborhood Park, a Community Park and the landscape buffer adjacent to surrounding major streets. These open spaces provide pedestrian connections within the SPA Plan area, passive recreational opportunities and view opportunities.

Open space lands indicated on the Site Utilization Plan (Exhibit 3) will be preserved through the dedication of open space easements and/or lots to the City or other appropriate agency, or Homeowners' Association, which will be determined at the Tentative Map level of approval. Uses will be strictly controlled through zoning regulations (see Chapter 3, PC District Regulations, of the SPA Plan). Landscaping within open space areas shall comply with all requirements of the Chula Vista Landscape Manual, Fire Protection Plan and Preserve Edge Plan.

The largest component of open space in the Otay Ranch is the Otay Ranch Preserve, described in the Resource Management Plan (RMP). As prescribed by the RMP, the development of each Otay Ranch Village requires conveyance of Preserve Land to the Preserve Owner/Manager. The Otay Ranch Preserve Conveyance requirement as described in the Otay RMP will be met through dedication of land within the Preserve to the Preserve Owner / Manager (POM) comprised of the City of Chula Vista and the County of San Diego.

The required contribution is 1.188 acres of open space conveyance per one acre of development less the acreage of “common use lands,” (local parks, schools, arterial roads and other land designated as public use areas). The actual conveyance obligation is based on the actual development area determined at the Final Map(s) level. The estimated Preserve conveyance requirement for Village 3 North & portion of 4 SPA Plan based on the SPA Plan calculation is approximately 259.6 acres.

## **B. Trails**

The SPA Plan area has been designed to accommodate the trails program described by the Otay Ranch Overall Design Plan, the City's Greenbelt Master Plan and the Otay Regional Park Concept Plan. The plan has been designed as a pedestrian-oriented village and provides bicycle and pedestrian circulation. All trails within the SPA Plan area have been located and designed to be as accessible as possible; however, off-street trails contain steep topography that may limit pedestrian and bicycle travel.

The Trails Plan is illustrated in Exhibit 12. The landscape treatment and design elements of village trails are also illustrated and described in the Village Design Plan. A summary of the components of the trail plan is provided below.

### **1. Regional Trails**

Chula Vista Regional Trails are located throughout the Otay Ranch project area. Specific to Village 3 North & portion of 4, Regional Trails are located on the north side of Main Street and the east side of Heritage Road. These trails are located adjacent to the roadways and may meander within the street right-of-ways. The trail widths and surfaces vary to accommodate pedestrians and bicycles.

### **2. Chula Vista Greenbelt & Otay Valley Regional Park Trails**

The Chula Vista Greenbelt Master Plan provides for a Greenbelt network through Otay Ranch. The Greenbelt Trail is located south of Village 3 North through the Otay River Valley within the existing Salt Creek Sewer Easement. The Village 3 North village core will be connected to the Greenbelt via the Regional Trails along Heritage Road and Main Street, ultimately connecting to the east and west Greenbelt segments within the Otay Valley Regional Park.

The Otay Valley Regional Park (OVRP) Concept Plan identifies a multi-use trail system through the Otay River Valley. The portion of the Greenbelt Trail described above coincides with the OVRP trail.

### **3. Village Pathway**

Village Pathways are inter-village multi-purpose paths that link all of the Otay Valley Parcel villages. In Village 3 North, a Village Pathway is proposed to extend south from Heritage Road, through the mixed use commercial area and to the neighborhood

park and school (See Exhibit 8, Trails Plan). The Village Pathway is a 10' concrete pathway, separated from the streets by a landscaped, tree-lined parkway.

**4. Village Trails**

Village Trails provide alternative circulation routes to village streets for pedestrians and bicycles separate from roadways. Trails are located within open space in the SPA Plan area. The landscape treatment and design elements of trails are addressed more fully in the SPA Plan. The Village 3 North Village Trail provides a pedestrian connection from Village 3 North to the Chula Vista Greenbelt/OVRP trail located in the Otay River Valley at the Main Street Regional Trail.

**5. Village Streets**

The village streets are designed to promote pedestrian, bicycle circulation and low speed electric vehicle travel. Sidewalks are provided on all public village streets. The preferred design for all village streets is the Parkway Residential Street, which provides a minimum five-foot wide sidewalk separated from the roadway by landscaped parkways. The SPA Plan provides additional design details.

**6. Promenade Trails**

Promenade Trails are tree shaded walkways located along the featured side of the Modified Two Lane Secondary Village Entry Street and Modified Promenade Residential Street. In Village 3 North, the Promenade Trail provides a pedestrian friendly connection between the Village Core Mixed Use area and the school, neighborhood park and residential neighborhoods. Promenade Trails are six foot wide concrete trails separated from the street by a landscaped parkway.

**C. Village Park and Recreation Program**

The Otay Ranch Parks and Recreation Facility Implementation Plan (adopted by the City Council on October 28, 1993) identifies the parks facility improvement standards for Otay Ranch. The City of Chula Vista Recreation Department and Public Works Department conducted subsequent facilities needs assessments and proposed some modifications to the adopted Otay Ranch Plan.

This SPA Park Master Plan strives for consistency with the Otay Ranch Plan and the current proposed plans and policies of the Parks and Recreation Department. This SPA Park Master Plan identifies the proposed types, quantities and location of the facilities provided at each park site in the SPA Plan area. In addition to identifying specific facility needs and requirements, the goal of the SPA Park Master Plan is to describe the elements necessary to ensure a rich variety of recreational opportunities, while satisfying identified recreation needs. The variety of recreational elements proposed and the recreational opportunities envisioned are discussed below.

**IX.8. Financing Park Facilities**

Chapter 17.10 of the Chula Vista Municipal Code, as amended, governs the financing of parkland and improvements. Included as part of the regulations are Park Acquisition and Development (PAD) fees established for the purpose of providing neighborhood and community parks. The Ordinance provides that fees are paid to the City prior to approval of a final subdivision map, or in the case of a residential development that is not required to submit a Final Map, at the time of the final building permit application.

The project is responsible for both the park development component and the acquisition component PAD Fees. The project parkland demand is 15.24 acres based on CVMC 17.10 (Table H.3). The SPA Plan provides 22.3 net acres of parkland.

PAD Fees are subject to periodic annual increases. Table H.7 identifies the fees calculated for the development component of the PAD fees while Table H.8 identifies the fees calculated for the parkland acquisition component of the PAD fees. These fees are estimates only and are dependent upon the actual numbers of units filed on the final map. Fees are also subject to change by the City Council. Single Family dwelling units are defined as all types of single-family detached housing and condominiums. Multi-Family dwelling units are defined as all types of attached housing including townhouses, attached condominiums, duplexes, triplexes and apartments.

<b>TABLE H.7</b>					
<b>Acquisition and Development (PAD) Fees (Preliminary Calculation)</b>					
<b>Development In-Lieu Component Only</b>					
<b>Development Phase</b>	<b>Dwelling Unit Type*</b>		<b>Development Component of PAD Fee's/DU Total</b>		<b>Total Fees Due</b>
	<b>SF</b>	<b>MF</b>	<b>\$12,676</b>	<b>\$9,408</b>	
Red	481	0	\$6,046,452	\$166,672	\$6,097,156
Blue	521	0	\$6,604,196	\$0	\$6,604,196
Yellow	0	0	\$0	\$0	\$0
Green	0	595	\$0	\$5,597,760	\$5,597,760
Purple	0	0	\$0	\$0	\$0
Subtotal	<b>1002</b>	<b>595</b>			
<b>Total</b>		<b>1597</b>	<b>\$12,701,352</b>	<b>\$5,597,760</b>	<b>\$18,299,112</b>
<p>* Dwelling unit type - Note that number and type of units listed reflect 'Land Use Designations' listed in the Otay Ranch General Development Plan, since this level of information is all that is available at the time of this document's preparation irrespective of underlying zoning district. Actual fee obligation calculation to be based on implementing ordinance definition of dwelling unit type irrespective of underlying zoning district containing said dwelling unit. Definitions of dwelling unit type used for calculating park obligations are based upon from the City's Parkland Dedication Ordinance CVMC chapter 17.10. These definitions differ from the way unit types are defined from a planning, land-use and zoning perspective that uses unit density per acre to categorize the type of unit. CVMC chapter 17.10 uses product type to categorize the type of unit distinguishing between attached and detached units. Consequently, the figures in this chart are preliminary estimates, and shall be recalculated at the time when the obligations are due as determined by chapter 17.10 of the CVMC.</p>					

**TABLE H.8  
Park Acquisition and Development (PAD) Fees (Preliminary Calculation)  
Acquisition In-Lieu Component Only**

Development Phase	Dwelling Unit Types*		Acquisition Component of PAD Fees/D.U. Total		Total
	SF	MF	\$5,106/SF Unit	\$3,788/MF Unit	
Red	481	0	\$2,455,986	\$0	\$2,455,986
Blue	521	0	\$2,660,226	\$0	\$2,660,226
Yellow	0	0	\$0	\$0	\$0
Green	0	595	\$0	\$2,253,860	\$2,253,860
Purple	0	0	\$0	\$0	\$0
Subtotal	1002	595			
<b>Total</b>	<b>1597</b>		<b>\$5,116,212</b>	<b>\$2,253,860</b>	<b>\$7,370,072</b>

\* Dwelling unit type - Note that number and type of units listed reflect 'Land Use Designations' listed in the Otay Ranch General Development Plan, since this level of information is all that is available at the time of this document's preparation irrespective of underlying zoning district. Actual fee obligation calculation to be based on implementing ordinance definition of dwelling unit type irrespective of underlying zoning district containing said dwelling unit. Definitions of dwelling unit type used for calculating park obligations are based upon from the City's Parkland Dedication Ordinance CVMC chapter 17.10. These definitions differ from the way unit types are defined from a planning, land-use and zoning perspective that uses unit density per acre to categorize the type of unit. CVMC chapter 17.10 uses product type to categorize the type of unit distinguishing between attached and detached units. Consequently, the figures in this chart are preliminary estimates, and shall be recalculated at the time when the obligations are due as determined by chapter 17.10 of the CVMC.

### IX.9. Financing Recreation Facilities

Chapter 17.10 of the CVMC, which requires the collection of fees from residential developments to pay for parkland acquisition and various park facilities within the City of Chula Vista, is subject to changes by the City Council from time to time. On October 25, 2005, the City Council approved Ordinance 3026 relating to the periodic annual review and adjustment of park acquisition and development fees. Approval of Ordinance 3026 resulted in an increase fee for parkland acquisition. In January of 2004 the Chula Vista City Council approved Ordinance 2945. This Ordinance amended Chapter 17.10 of the CVMC, which requires the collection of In-Lieu Park Acquisition and Development Fees from residential developments that are not required to submit a subdivision map or parcel map.

Some of the previous council actions that contributed to an increase in the in-lieu fees for park development and land acquisition are Ordinances No. 2886 and 2887 (both approved on November 19, 2002). Ordinance 2886 amended Chapter 17.10 of the CVMC to update the Parks Acquisition and Development Fees. Ordinance 2887 amended Chapter 3.50 of the Municipal Code, as detailed in the *"Public Facilities DIF, November 2002 Amendment"*, adding a new recreation component to the Public Facilities DIF, updating the impact fee structure and increasing the overall fee.

Chapter 17.10 of the Chula Vista Municipal Code, first adopted in 1971, details requirements for parkland dedication, park improvements and the collection of in-lieu fees (i.e., PAD fees) from developers of residential housing in subdivisions or in divisions created by parcel maps,

both east and west of I-805. PAD fees cover parkland acquisition and the cost of related capital items associated with parkland development, including:

- Drainage Systems
- Street Improvements
- Lighted Parking Lots
- Concrete Circulation Systems
- Security Lighting
- Park Fixtures (*drinking fountains, trash receptacles, bicycle racks, etc.*)
- Landscaping (*including disabled accessible surfacing*)
- Irrigation Systems
- Restrooms and Maintenance Storage
- Play Areas (*tot lots, etc.*)
- Picnic Shelters, Tables, Benches
- Utilities
- Outdoor Sports Venues (*tennis courts, baseball/softball fields, basketball courts, multi-purpose sports fields, skateboard and roller blade venues*)

In addition to parks-related items, a 1987 revision called for the dedication, within community parks, of major recreation facilities to serve newly developing communities, including:

- Community centers
- Gymnasiums
- Swimming pools

Historically, PAD fees have not been sufficient to construct these additional large capital items. However, major recreation facilities are now funded through a newly created component of the Public Facilities DIF. The major capital items to be included in the new component are: community centers, gymnasiums, swimming pools, and senior/teen centers. Based on the Parks and Recreation Master Plan, 140,595 square feet of major recreation facilities will be required to meet new development growth through build-out at a gross construction cost of over \$32 million. Since the demand for major public recreation facilities is created by residential development, facilities costs are not spread to commercial/industrial development. Table H.9 provides an estimate of the Recreational PDIF Fees for the project.

<b>TABLE H.9</b>					
<b>Village 3 North &amp; a portion of 4 SPA</b>					
<b>Public Facilities Fees for Recreation<sup>23</sup> (Preliminary Calculation)</b>					
<b>Development Phase</b>	<b>Dwelling Units</b>		<b>Recreation Fee</b>		<b>Total</b>
	<b>SF</b>	<b>MF</b>	<b>\$1,201</b>	<b>\$1,201</b>	
Red	481	44	\$577,681	\$0	\$577,681
Blue	521	0	\$625,721	\$0	\$625,721
Yellow	0	0	\$0	\$0	\$0
Green	0	595	\$0	\$714,595	\$714,595
Purple	0	0	\$0	\$0	\$0
Subtotal	1002	595			
<b>Total</b>	<b>1597</b>		<b>\$1,203,402</b>	<b>\$714,595</b>	<b>\$1,917,997</b>

**IX.10. Threshold Compliance**

- A. On a project-level, the Neighborhood Park and the Community Park acreage provided within Otay Ranch Village 3 North & a portion of 4 SPA meets and exceeds the demand on a cumulative basis. In order to comply with the City’s local park standard, it is the responsibility of the developer to comply with the City’s Landscape Manual related to park planning, to grade the sites according to the approved plan, pay fees at a rate in effect at the time of Final Map approval and dedicate land, or a combination thereof, as required by the PLDO unless otherwise approved by the Director of Development Services.
- B. Based upon the analysis contained in this section of the PFFP, the Parks Threshold Standard for both neighborhood and community parks is projected to be met at the completion of the project subject to the Applicant's compliance with the park conditions as described herein. The PUB designations correspond to the Project EIR numbered Public Services mitigation measures.
- C. (PUB-8) Prior to the approval of the Final Map, or, for any residential development within the project that does not require a Final Map, prior to building permit approval, the applicant shall either dedicate parkland and/or pay applicable Park Acquisition and Development in-lieu fees in accordance with the phasing indicated in this PFFP and the project’s approved SPA Plan and a park agreement, if any, subject to approval of the Director of Development Services. In-lieu fees shall be based on the Park Acquisition and Development fees in effect at the time of issuance of building permits, unless stated otherwise in a parks or development agreement.
- D. (PUB-9) Prior to issuance of each building permit for any residential dwelling units, the Applicant(s) shall pay Recreation Facility Development Impact Fees (part of the Public Facilities Development Impact Fee) in accordance with the fees in effect at the time of building permit issuance.
- E. (PUB-10) Prior to the approval of the first Final Map for the Project the developer shall enter into an agreement with the City that provides for the following: dedication of public

<sup>23</sup> The PFDIF Fee is subject to change as it is amended from time to time. The total number of dwelling units and type of dwelling unit filed on the Final Map or for which building permits are required shall determine the actual fee amount.

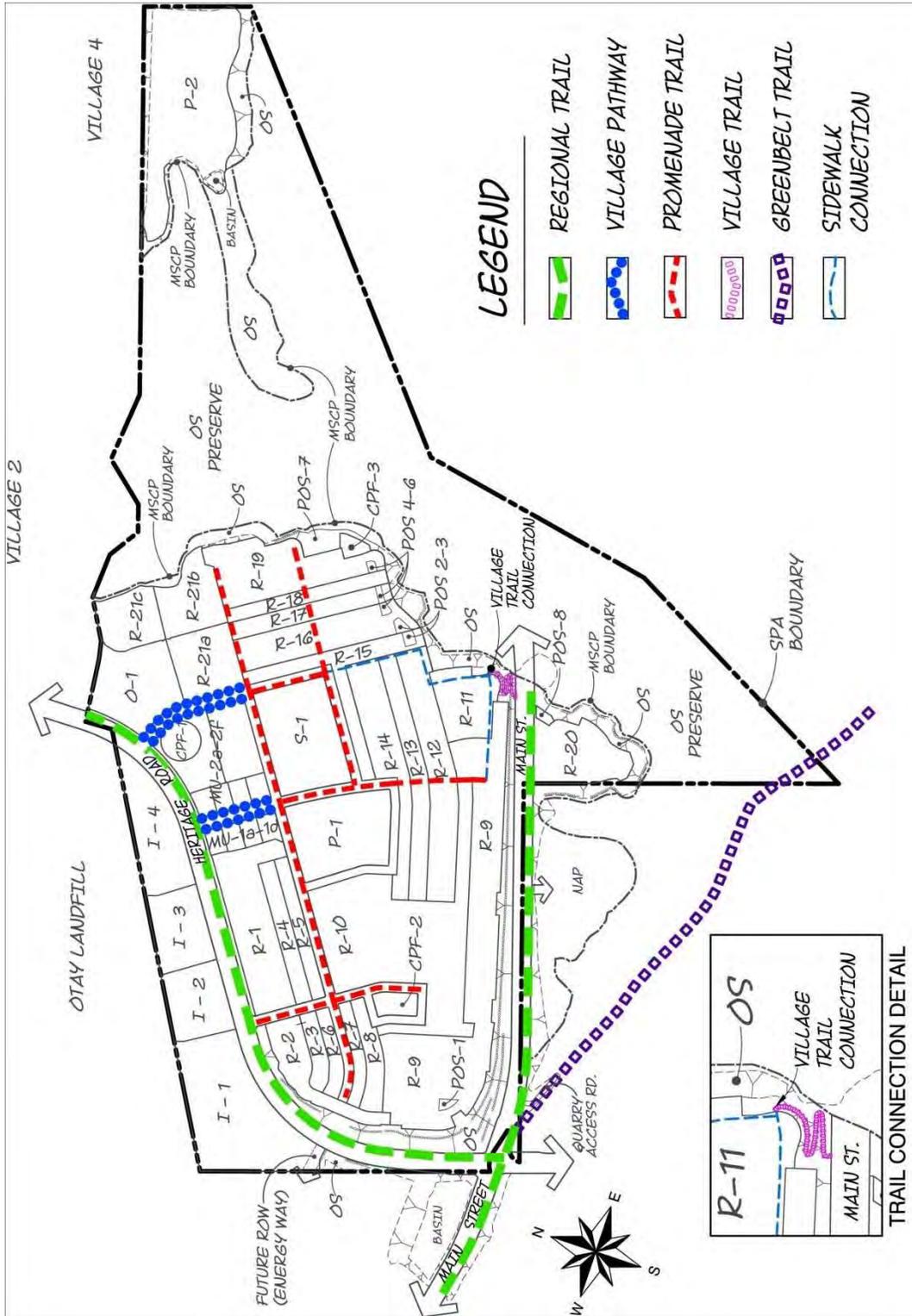
park sites (which may include off-site dedication in Village 8 East); the payment of PAD fees; and a schedule for completion of improvements, including utilities, and streets adjacent to the park sites, all to the satisfaction of the Development Services Director. Under the current method for delivery of new parks the City will award a design-build contract for the Project's neighborhood park. The Agreement will include provisions that in the event the City chooses not go forward with a design-build contract, the developer will be obligated to fully comply with the Parkland Ordinance and park Threshold Standards by constructing the parks in accordance with all City standards and under a time schedule as specified in the agreement.

- F. (PUB-11) Prior to approval of the first Final Map for the Project, the Applicant(s) shall offer for dedication all public parkland identified in the Project's approved SPA Plan, or as approved by the Development Services Director or their designee. Park facilities required to meet the overall park obligation shall be identified on the first Final Map and shall be publically accessible.
- G. (PUB-12) The applicant shall comply with the Threshold Compliance contained within this PFFP.
- H. Prior to approval of the first final map, the Applicant shall provide the City with an Irrevocable Offer of Dedication (IOD) for the 6.7 acre (net) neighborhood park site (Lot P-1) and approximately 8.56 net acres of Community Park land within either the Village 4 Community Park or the Village 8 East Active Recreation site (Lot P-2) acceptable to the Development Services Director. The Existing 1.9 acre IOD within the Village 4 Community Park in satisfaction of the Village 2 Project area park acre obligation shall be accounted for when calculating available eligible park credit within the Village 4 Community Park.
- I. Prior to approval of the Final Map that includes the Parks & Recreation lot ("P-2"), Applicant shall:
  - a. Demonstrate to the satisfaction of the Development Services Director that an access road to the Village 4 Community Park has been provided.
  - b. Provide adequate sewer and water connections to serve the future park and recreation facilities.
- J. Prior to approval of each Final Map for the Project, the Applicant shall offer for dedication all public trails, easements or rights-of-way for the trails, free and clear of all encumbrances Final Map unless otherwise approved by the City, contained in said map.
- K. Prior to the approval of the first Final Map for the Project a Maintenance Landscape Master Plan and Responsibility Map will submitted to for approval by the Director of Development Services. The Maintenance Landscape Master Plan will contain a matrix of which landscaping improvements will be maintained with general funds and which will require a separate, identified funding mechanism.
- L. Prior to the approval of the first Final Map for the Project a Community Facilities District, or other funding mechanism to the satisfaction of the Director of Public Works, shall be established for landscaping and streetscape maintenance within the public right of way and maintenance of public open space.
- M. Prior to the approval of the first map for the Project the Project shall annex into the Otay Ranch Preserve Maintenance CFD 97-2 Improvement Area "C."
- N. Prior to recordation of each final map, the Applicant shall convey fee title to land within the Otay Ranch Preserve to the Otay Ranch Preserve Owner Manager or its designee at a

ratio of 1.188 acres for each acre of development area, as defined in the Otay Ranch Resource Management Plan. Access to the conveyed property for maintenance purposes shall also be provided to the satisfaction of the Preserve Owner Manager.

- O. Prior to approval of the first final map, the Applicant shall obtain approval of and record an easement for public trail purposes for the segments of the Chula Vista Greenbelt Trail within the boundaries of Village 3 North on any portion of Wiley Road and/or the existing Salt Creek Sewer Easement, owned by the Applicant, to the satisfaction of the Development Services Director.
- P. The Applicant shall submit and obtain approval of trail improvement plans and shall construct all required trails fencing and signage, consistent with City trail standards when required by the Development Services Director. Said improvement plans containing Chula Vista Greenbelt Trail segments as depicted on the Village 3 North and a Portion of Village 4 Tentative Map (CVT 13-02), to be located within existing Salt Creek Sewer Easement, will include minor improvements such as fencing and signage.
- Q. Prior to the approval of the first residential building permit within the Village 3 North Red Phase, as depicted on the Conceptual Phasing Plan of the Otay Ranch Village 3 North and a Portion of 4 SPA Plan Exhibit 33, the Applicant shall construct all Chula Vista Greenbelt Trail improvements, including fencing and signage consistent with City trail standards, as required by the Development Services Director.





Source: Otay Ranch Village 3 North and a portion of Village 4 SPA Plan, July 25, 2014

## Trails Plan Exhibit 8

## **X. WATER**

### **X.1. Threshold Standard**

- A. Developer will request and deliver to the City a service availability letter from the Water District for each project.
- B. The City shall annually provide the San Diego County Water Authority, the Sweetwater Authority, and the Otay Water District with a 12- to 18-month development forecast and request an evaluation of their ability to accommodate the forecast and continuing growth. The Districts' replies should address the following:
  - 1. Water availability to the City and Planning Area, considering both short- and long-term perspectives.
  - 2. Amount of current capacity, including storage capacity, now used or committed.
  - 3. Ability of affected facilities to absorb forecasted growth.
  - 4. Evaluation of funding and site availability for projected new facilities.
  - 5. Other relevant information the district(s) desire to communicate to the City and the GIOC.

### **X.2. Service Analysis:**

The Otay Water District (OWD) will provide water service for Otay Ranch Village 3 North & portion of Village 4 SPA Plan area. Annexation into Improvement Districts 22 and 27 will be required prior to water service being provided. The district has existing and planned facilities in the vicinity of the project site. Expanding the existing system can provide future water service.

Water supply information provided in this PFFP is based on the *Water Supply Assessment and Verification Report (WSAV), September, 2013, Otay Water District*, and the *Overview of Water Service for Otay Ranch University Villages 3 North, A Portion of Village Four, 8 East, and 10, May 2014, Dexter Wilson Engineering, Inc.*, referred to the Dexter Wilson Water Study in this PFFP. Additionally, the SPA Plan document includes the *Otay Ranch Villages 3 North, A Portion of Village Four, 8 East, and 10 Water Conservation Plans, 2014, Dexter Wilson Engineering, Inc.*

The developer of the project will be required to prepare, for review and approval by the Otay Water District, a Subarea Water Master Plan (SAMP) prior to approval of final engineering plans for the project. The SAMP will provide more detailed information on the project such as project phasing; pump station and reservoir capacity requirements, and extensive computer modeling to justify recommended pipe sizes. The OWD will not approve final engineering improvement plans until a SAMP has been approved for the project.

The design criteria implemented to evaluate the potable and recycled water systems for the project are established in accordance with the *Otay Water District Water Resources Master Plan, April 2013, Otay Municipal Water District*. The design criteria are utilized for analysis of the existing water system as well as for design and sizing of proposed improvements and expansions to the existing system to accommodate demands in the study area.

### **X.3. Project Processing Requirements**

The SPA Plan and the PFFP are required by the Growth Management Program to address the following issues for water services.

- A. Identify phased demands in conformance with street improvements and in coordination with the construction of sewer facilities.
- B. Identify location of facilities for onsite and offsite improvements in conformance with the master plan of the water district serving the proposed project.
- C. Provide cost estimates and proposed financing responsibilities.
- D. Identify financing methods.
- E. A Water Conservation Plan shall be required for all major development projects (50 dwelling units or greater), or commercial and industrial projects with 50 EDUs of water demand or greater.

### **X.4. Existing Conditions**

The California Urban Water Management Planning Act (UWMP) requires that each urban water supplier providing water for municipal purposes, either to more than 3,000 customers, or more than 3,000 acre feet of water annually, must prepare, adopt, and update a UWMP at least once every five years. This applies to Metropolitan Water District (MWD), San Diego County Water Authority SDCWA, and its member agencies, including the OWD. The intent of an UWMP is to present information on water supply, water usage/demand, recycled water, and water use efficiency programs within a water district's service area over a 25 year time frame.

The UWMP process ensures that water supplies are being planned to meet future growth. The most current supply and demand projections are contained in the 2010 UWMPs of MWD, SDCWA, and OWD. San Diego County Water Authority member districts rely on the UWMPs and Integrated Resources Plans (IRPs) of MWD and the Regional Water Facilities Master Plan of SDCWA to document supplies available to meet projected demands.

In the 2010 UWMPs, MWD, SDCWA, and all SDCWA member agencies, including OWD, have determined that adequate water supplies would be available to serve existing service areas under normal year, single dry year, and multiple dry year conditions through the year 2035.

The GMOC annually distributes a questionnaire to relevant city departments and public facility and service agencies to monitor the status of Threshold Standards compliance. The response from OWD in support of the 2013 GMOC Annual Report included the topic of existing water system adequacy to serve projected growth for Chula Vista. The response identified OWD's capital improvement programs required to serve the forecasted water demands and identified a list of capital improvement projects (CIPs) that would need to be implemented in order to meet projected demand. The OWD concluded that the existing potable and recycled water systems including their CIP's should be adequate to meet the forecasted growth within the City of Chula Vista over the next five-year time frame. However, the State's water supply continues to face the climatological, environmental, legal and other challenges that impact water supply sources.

**A. Metropolitan Water District:**

In November 2010, MWD adopted their 2010 Regional UWMP, which evaluates water supply reliability, over a 20-year period, for average, single-dry, and multiple-dry years within its service area. MWD developed estimates of total retail demands for the region, factoring in the impacts of conservation. The water reliability analysis identifies both the current supplies and supplies under development to meet projected demands. MWD's reliability assessment showed that MWD can maintain reliable water supplies to meet projected demands through the year 2035. MWD also identified a planning buffer supply intended to protect against the risk that future demands could be higher than projected. As part of its implementation of the planning buffer, MWD periodically evaluates water supply development, supply conditions, and projected demands to ensure that the region is not under or over developing supplies. The planning buffer will ensure that Southern California, including San Diego County, will have adequate water supplies to meet long-term future demands.

**B. San Diego County Water Authority:**

The SDCWA service area covers approximately 951,000 acres and encompasses the western third of San Diego County. SDCWA has 24 member agencies, including OWD. SDCWA is responsible for ensuring a safe and reliable water supply to support the region's economy and quality of life for over three million residents. SDCWA imports between 70% and 95% of the water used in the San Diego region from MWD. In 2008, MWD provided 71% of the San Diego region's water supply. Most of this water is obtained from the Colorado River and the State Water Project (SWP) through a system of pipes, aqueducts, and associated facilities. Historically, SDCWA has relied on imported water supplies purchased from MWD to meet the needs of its member agencies. SDCWA is the largest MWD member agency in terms of deliveries, accounting for nearly 25% of MWD's delivered water.

According to the SDCWA 2010 UWMP, the San Diego region has reduced water usage over 50,000 acre feet average during the past three years. Conserved agricultural transfer water from the Imperial Valley has begun flowing to the San Diego region. This source provided approximately 70,000 acre feet in 2010 and will provide approximately 200,000 acre feet by 2021. This relatively new source of water is the result of SDCWA entering into the Quantification Settlement Agreement (QSA) with other water agencies in October 2003. The QSA resolved long-standing disputes regarding Colorado River water use among several agencies, and established a water budget for the agricultural agencies. This resolution permitted the implementation of several water conservation and transfer agreements, including the SDCWA/Imperial Irrigation District (IID) transfer agreement.

The SDCWA UWMP contains documentation of existing and planned water supplies. These supplies include MWD (imported Colorado River water and SWP water), and local member agency supplies that include (1) IID water transfer supplies; (2) supplies from conservation projects to line the Imperial Valley's All-American Canal and the Coachella Valley's Coachella Canal; and (3) development of a seawater desalination facility at the Encina Power Plant in Carlsbad, which is anticipated to produce 56,000 acre feet per year of water supplies. Additionally, since 1980, approximately 5 to 30% of member agency water has come from local sources, primarily from surface water reservoirs. Recycled water and groundwater recovery projects are growing in importance in the region. These projects coupled with water

conservation efforts have made SDCWA member agencies less dependent on imported water.

<b>Table I.1</b>					
<b>Average/Normal Water Year Supply and Demand Assessment (acre feet/yr)</b>					
<b>Local Supplies</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Surface Water	48,206	47,940	47,878	47,542	47,289
Water Recycling	38,660	43,728	46,603	48,278	49,998
Groundwater	11,710	11,100	12,100	12,840	12,840
Groundwater Recovery	10,320	15,520	15,520	15,520	15,520
Seawater Desalinization	0	56,000	56,000	56,000	56,000
<i>Imported Supplies</i>					
IID Water Transfer	100,000	190,000	200,000	200,000	200,000
Supply from MWD	358,189	230,601	259,694	293,239	323,838
Coachella Canal and All American Canal Lining Projects	80,200	80,200	80,200	80,200	80,200
<b>Total Projected Supplies</b>	<b>647,285</b>	<b>675,089</b>	<b>717,995</b>	<b>753,619</b>	<b>785,685</b>
<b>Total Estimated Demands<sup>1</sup></b>	<b>647,285</b>	<b>675,089</b>	<b>717,995</b>	<b>753,619</b>	<b>785,685</b>
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> With Conservation

Source: University Villages Project Environmental Impact Report

<b>Table I.2</b>					
<b>Single Dry Water Year Supply and Demand Assessment (acre feet/yr)</b>					
<b>Local Supplies</b>	<b>2015</b>	<b>2020</b>	<b>2025</b>	<b>2030</b>	<b>2035</b>
Surface Water	17,932	17,932	17,932	17,932	17,932
Water Recycling	38,660	43,728	46,603	48,278	49,998
Groundwater	9,977	9,977	9,977	9,977	9,977
Groundwater Recovery	10,320	15,520	15,520	15,520	15,520
Seawater Desalinization	0	56,000	56,000	56,000	56,000
<i>Imported Supplies</i>					
IID Water Transfer	100,000	190,000	200,000	200,000	200,000
Supply from MWD	430,431	305,101	338,501	376,023	409,389
Coachella Canal and All American Canal Lining Projects	80,200	80,200	80,200	80,200	80,200
<b>Total Projected Supplies</b>	<b>687,520</b>	<b>718,458</b>	<b>764,733</b>	<b>803,930</b>	<b>839,016</b>
<b>Total Estimated Demands<sup>1</sup></b>	<b>687,520</b>	<b>718,458</b>	<b>764,733</b>	<b>803,930</b>	<b>839,016</b>
<b>Difference</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>1</sup> With Conservation

Source: University Villages Project Environmental Impact Report

Based on the imported and member agency local water sources, SDCWA estimates that it, along with member agency local sources, will be able to supply 647,284 acre feet of water in 2015. Therefore, according to the MWD and SDCWA 2010 UWMPs, there is available water to meet all of the region's anticipated demand, including the development of the Village 3 North & portion of 4 SPA Project, in average/normal and dry water years, as shown in Table I.1, and I.2.

**C. Otay Water District:**

The Project is within the boundaries of the OWD, which provides water services to a large portion of San Diego East County and Eastern Chula Vista, including the EastLake community, Otay Ranch, and Otay Mesa along the U.S./Mexico International Border. OWD covers 137 square miles with approximately 450 miles of pipelines, 21 pump stations, and 37 reservoirs with a total storage capacity of approximately 190 million gallons. OWD provides 90% of its water service to residential and 10% to commercial, industrial, and other land uses. Average daily consumption is approximately 40,324 acre feet. OWD also operates the Ralph W. Chapman Water Recycling Facility.

The OWD 2010 UWMP provides an overview of OWD's service area, its current water supply sources, supply reliability, water demands, and measures to reduce water demand, and planned water supply projects and programs. Reliability for water service is based on the documentation in the UWMP's prepared by MWD and SDCWA and that these agencies have determined that they will be able to meet potable water demands through 2035, during normal and dry year conditions. The OWD 2010 UWMP relies on MWD and SDCWA for its potable supply, and OWD works with these agencies to prepare consistent demand projections for OWD's service area.

The OWD has several connections to SDCWA Pipeline No. 4 which delivers filtered water from the Metropolitan Water District's filtration plant at Lake Skinner in Riverside County. The OWD also has 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.

1. **Existing Potable Water System:** There are no existing potable water facilities within the Project area. The project can be served by the Central Service Area of OWD. This area is supplied water from Connection Nos. 10 and 12 to the SDCWA aqueduct, which fills 624 Zone reservoirs. Water is then distributed within the 624 Zone and pumped to the 711 Zone storage and distribution systems. The Village 3 North & portion of 4 SPA Project is within the 624 Zone. According to the Dexter Wilson Water Study the following existing potable water facilities are located in the vicinity of the project area:

**340 Zone:** There is a small area west of Village 3 North that is served by the 340 Zone. This area is fed by a pressure reducing station and includes a piping network that extends to the western boundary of Village 3 North. The proposed project would not be served by the 340 Zone, but improvements to the 340 Zone will be necessary per the *Otay Water District Water Resources Master Plan (WRMP, October 2008, last amended April 2013, Otay Water District.*

**624 Zone:** This zone has three existing storage reservoirs. The 624-2 Reservoir is located between Otay Lakes Road and East H Street, has a capacity of 8.0 million gallons, and is supplied by Connection No. 10 to the SDCWA aqueduct. The 624-1 and 624-3 Reservoirs are supplied by Connection No. 12, and have a capacity of 12.4 million gallons and 30 million gallons, respectively. The 624-1 Reservoir is located adjacent to the eastern boundary of Otay Ranch Village 5 and is located along EastLake Parkway, just north of Olympic Parkway. There are currently no 624 Zone facilities in the vicinity of the project area (Dexter Wilson Water Study).

**711 Zone:** There is currently one pump station in the 711 Zone, referred to as the Central Area Pump Station, that is located at the 624-1 Reservoir site adjacent to the eastern boundary of Otay Ranch Village 5. This station pumps water from the 624 Zone system into the 711 Zone distribution system and into two existing 711 Zone reservoirs located in the EastLake Greens development. The 711 Zone Pump Station currently has five pumps (one standby), each rated for 4,000 gallons per minute (gpm), which results in a firm station capacity of 16,000 gpm.

Three existing reservoirs are in the 711 Zone. The two EastLake Greens reservoirs have capacities of 2.8 and 2.2 million gallons for a total of 5.0 million gallons. A 16.0 million gallon reservoir, Reservoir 711-3, was constructed north of the Rolling Hills Ranch project. With construction of this reservoir, OWD has sufficient storage within the 711 Zone to meet the demands from projected development in this zone (Dexter Wilson Water Study).

The major 711 Zone pipelines in the vicinity of the project area include a 20-inch line in EastLake Parkway, a 16-inch line in Hunte Parkway, and 12-inch lines in La Media Road and Magdalena Avenue.

2. **Recycled Water:** The Ralph W. Chapman Water Recycling Facility has a rated capacity of 1.3 million gallons per day (mgd) with a maximum production of approximately 1.1 mgd and could be expanded to an ultimate capacity of 2.50 mgd. Typically the summer demands exceed the 1.1 mgd plant capacity. The District has the capability to supplement the recycled water supply with the potable water. The South Bay Water Treatment Plant has an ultimate rated capacity of 15 mgd and OWD obtained capacity rights to 8.0 mgd of recycled water. This additional source of recycled water will allow OWD to meet existing and future recycled water demands. The OWD has master planned a series of pump stations, reservoirs, and transmission lines to integrate this source of water into the existing recycled water system. Currently, there is an 8-inch recycled water main adjacent to the northwest corner of the Village 8 East SPA Plan (Dexter Wilson Water Study).

Storage of the effluent from the Ralph W. Chapman facility is provided by two ponds in the District's Recycled Use Area. The storage ponds have a high water line of approximately 944 feet and 927 feet, respectively, and provide the storage and supply for the 927 Zone distribution system. The 680 Zone distribution system has been supplied by pressure reducing off the 927 Zone system, but ultimately will be supplied by the South Bay Water Reclamation Plant.

According to the Dexter Wilson Water Study, the conveyance facilities to convey water from the South Bay Treatment Plant to the use areas, including the 680

Zone use areas, are currently being implemented. A 12-inch 680 Zone pipeline has been constructed in Hunte Parkway along the southern boundary of Village 11, and an 8-inch 927 Zone pipeline has been constructed in EastLake Parkway to Hunte Parkway.

**X.5. Adequacy Analysis**

**A. Water Conservation Plan**

A Water Conservation Plan is required for all major development projects (50 dwelling units or greater, or commercial and industrial projects with 50 EDUs of water demand or greater). This plan is required at the Sectional Planning Area (SPA) Plan level or equivalent for projects which are not processed through a Planned Community Zone. The city has adopted guidelines for the preparation and implementation of the Water Conservation Plan.

The *Otay Ranch Villages 3 North and A Portion of Village Four, Village 8 East, and Village 10 Water Conservation Plans, 2014, Dexter Wilson Engineering Inc.*, provides an analysis of water usage requirements of the proposed project, as well as a detailed plan of proposed measures for water conservation, use of recycled water, and other means of reducing per capita water consumption from the proposed project, as well as defining a program to monitor compliance. The Water Conservation Plan is presented in conjunction with the SPA Plan document as Chapter 9 and therefore is not included in the PFFP.

**B. Otay Ranch Village 3 North & a portion of 4 SPA Water Demand**

Table I.3 presents the duty factors used in projecting the total average day potable and recycled water demands for the project. The required fire flows and durations are also listed. The City of Chula Vista utilizes the Uniform Fire Code for determining required fire flows and durations for new development. For single-family residences, a fire flow of 1,500 gpm for duration of two hours is typically required.

<b>Table I.3 Water Duty Factors</b>			
<b>Land Use Designation</b>	<b>Domestic Demand</b>	<b>Required Fire Flow</b>	<b>Required Fire Flow Duration Hours</b>
Single Family-Medium (1-3 DU/AC)	850 gpd/unit	1,500	2
Single Family-High (3-8 DU/AC)	500 gpd/unit	1,500	2
Multi-Family (>8 DU/AC)	300 gpd/unit	2,500	2
Schools	1,785 gpd/ac	3,500	3
Commercial	1,785 gpd/ac	3,000	3
CPF, Fire Station	893 gpd/ac	3,000	3
Industrial	893 gpd/ac	5,000	4
Irrigation (Recycled Water)	2,155 gpd/ac	--	--

*Source: Dexter Wilson Engineering*

Table I.4 provides the projected potable water demand for the project. The total estimated potable water use is approximately .56 mgd. The SPA Plan proposes a maximum of 1,597 dwelling-units. The estimated recycled water demand is 0.17 mgd.

<b>Table I.4 Projected Potable Water Demands</b>					
<b>Planning Area</b>	<b>Land Use</b>	<b>Quantity</b>	<b>Unit Flow</b>	<b>Total Average Demand, gpd</b>	<b>EDUs</b>
R-1	SF	74 units	300 gpd/unit	22,200	44.4
R-2	SF	34 units	300 gpd/unit	10,200	20.4
R-3	SF	14 units	300 gpd/unit	4,200	8.4
R-4	SF	25 units	300 gpd/unit	7,500	15
R-5	SF	25 units	300 gpd/unit	7,500	15
R-6	SF	16 units	300 gpd/unit	4,800	9.6
R-7	SF	19 units	300 gpd/unit	5,700	11.4
R-8	SF	21 units	300 gpd/unit	6,300	12.6
R-9	SF	149 units	500 gpd/unit	74,500	149
R-10	SF	170 units	300 gpd/unit	51,000	102
R-11	SF	27 units	500 gpd/unit	13,500	27
R-12	SF	70 units	300 gpd/unit	21,000	42
R-13	SF	46 units	300 gpd/unit	13,800	27.6
R-14	SF	67 units	300 gpd/unit	20,100	40.2
R-15	SF	51 units	300 gpd/unit	15,300	30.6
R-16	SF	54 units	300 gpd/unit	16,200	32.4
R-17	SF	26 units	300 gpd/unit	7,800	15.6
R-18	SF	19 units	500 gpd/unit	9,500	19
R-19	SF	51 units	500 gpd/unit	25,500	51
R-20	SF	44 units	500 gpd/unit	22,000	44
R-21a	MF	190 units	255 gpd/unit	48,450	96.9
R-21b	MF	170 units	255 gpd/unit	43,350	86.7
R-21c	MF	155 units	255 gpd/unit	39,525	79.1
MU-1a-d	MF	80 units	255 gpd/unit	20,400	40.8
MU-1a-d	Commercial	1.9 ac <sup>1</sup>	1,607 gpd/ac	3,053	6.1
MU-2a-e	Commercial	5.5 ac <sup>1</sup>	1,607 gpd/ac	8,839	17.7
IND-1-3	Industrial	15.6 ac <sup>2</sup>	848 gpd/ac	13,229	26.5
O-1	Office	5.2 ac.	1,607 gpd/ac	8,356	16.7
S-1	School	8.3 ac	1,428 gpd/ac	11,852	23.7
P-1	Park	7.9 ac	0 gpd/ac <sup>3</sup>	2,160	4.3
P-2 (V4)	Park	17.8 ac	0 gpd/ac <sup>3</sup>	0	0
CPF-1	CPF	2.6 ac	714 gpd/ac	1,856	3.7
CPF-2	CPF	1.1 ac	0 gpd/ac <sup>4</sup>	0	0
CPF-3	CPF	0.5 ac	0 gpd/ac <sup>4</sup>	0	0
<b>Subtotal</b>		<b>1,597 Units</b>		<b>559,670</b>	<b>1,119</b>
<sup>1</sup> Mixed use commercial is based on 90 percent of gross acreage. <sup>2</sup> Net acreage was used for industrial sites. <sup>3</sup> To be irrigated with recycled water. Nominal potable water was estimated by Dexter Wilson to account for standard fixtures (lavatories, during fountains, etc.). <sup>4</sup> Small CPF sites will be used as parks and have no potable water use. <sup>5</sup> Open space preserve, freeway lots, future development areas, and AR-11 are not included in the potable water projections because either no potable water facilities are anticipated or no development is currently proposed.					

Source: Dexter Wilson Engineering

Normally, the potable water distribution system is designed to maintain static pressures between 65 psi and 200 psi. This standard is used to initially divide a project between water service zones. According to Dexter Wilson Engineering, the potable water distribution system has been 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 have been 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.

Land Use	Quantity	Percentage to be Irrigated	Irrigated Acreage	Recycled Water Irrigation Factor	Average Recycled Water Demand, gpd
Open Space	37.8 ac	100	37.8	2,155	81,459
Parks	25.7 ac	100	25.7	2,155	55,385
Commercial (MU-2a-e)	6.1 ac	10	0.6	2,155	1,293
Industrial	33.8 ac	5	1.7	2,155	3,664
MF Residential/MU-1 a-d	595 units	15	0	45	26,775
School	8.3 ac	20	1.7	2,155	3,660
<b>Total</b>					<b>172,236</b>

*Source: Dexter Wilson Engineering*

Landscape systems generally require a minimum of 80 psi at the meter to obtain adequate coverage of the irrigated area. Dexter Wilson Engineering expects that this minimum pressure can be achieved at all locations within the project. The primary criteria for sizing recycled water lines is the ability to meet peak hour recycled water demands while maintaining a maximum pipeline velocity of 8 feet per second.

**C. Otay Water District Water Supply Assessment and Verification Report**

The OWD prepared a Water Supply Assessment and Verification Report (WSA&V Report) at the request of the City of Chula Vista (City) for the University Villages Project, which includes Villages 3 North, a Portion of 4, 8 East, and 10. The WSA&V Report includes, among other information, an identification of existing water supply entitlements, water rights, water service contracts, water supply projects, or agreements relevant to the identified water supply needs for the proposed Project. This WSA&V Report assesses, demonstrates, and documents that sufficient water supplies are planned for and are intended to be available over a 20-year planning horizon, under normal conditions and in single and multiple dry years to meet the projected demand of the proposed University Villages project and the existing and other planned development projects to be served by the OWD. The WSA&V is attached as an appendix to the University Villages Project Environmental Impact Report.

## **X.6. Proposed Facilities:**

### **A. Potable Water:**

Potable water service to the Village 3 North development will be provided by extending the 624 Zone 12-inch water lines in Heritage Road and Village Two to the north. On-site development would be served by constructing 8-inch and 12-inch lines from this backbone 624 Zone loop. See Exhibit 9 for the proposed potable Water System.

The Portion of Village 4 that is being processed with the Village 3 North project is within the 711 Zone for water service. Water service to this site would be provided by constructing an off-site 12-inch line in La Media Road and extending water service to the P-2 park site.

Generally, the potable water distribution system is designed to maintain static pressures between 65 pounds per square inch (psi) and 200 psi. This criteria is used to initially divide a project between water service zones. The potable water distribution system has been 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 demand plus fire flow scenario and a maximum velocity of 6 feet per second under peak hour flow conditions.

Fire flow also was evaluated by Dexter Wilson Engineering. The fire flow requirements for each building within the project area will be a function of building design, including height and structure type. Since this level of detail is not known at this planning stage, this analysis uses the OWD fire flow requirements in master planning storage, transmission, and distribution facilities throughout the District. As part of the building permit process, the City of Chula Vista Fire Department will evaluate the fire flow requirements.

According to the Dexter Wilson Water Study, the total projected potable water demand for the proposed project is approximately .55 mgd or approximately 600 acre feet per year. Per the WSAV and the Dexter Wilson Water Study, there are sufficient water supplies to meet the project demand.

All facilities within the boundaries of the proposed project would be constructed by the applicant or his/her designee. Final location, sizing, phasing, and hydraulic modeling of the project water system will be presented in the SAMP prepared for the proposed project. The applicant or his/her designee would be eligible for reimbursement for the construction of facilities included in OWD's Capital Improvement Program.

### **B. Recycled Water**

The largest potential recycled water use areas in Otay Ranch Village 3 & a portion of 4 SPA include open space and parks. Recycled water may also be utilized to irrigate the common areas of schools, industrial, multi-family residential and commercial facilities. The project will be served by the 680 Zone recycled water system. The OWD Capital Improvement Program identifies 680 Zone transmission lines in Heritage Road, La Media Road, and Otay Valley Road. Exhibit 10 shows the recommended facilities to serve Village 3 North & a portion of Village 4.

## X.7. **Financing Water Facilities:**

The financing and construction of potable water facilities is provided by two methods:

- **Capacity Fees:** OWD's Capital Improvement Program (CIP) wherein the District 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 Projects typically include supply sources, pumping facilities, operational storage, terminal storage, and transmission mains.

The OWD may use bond debt financing from Improvement Districts 22 and 27 to assist in the financing of the District's CIP program. CIP projects are paid for by capacity fees collected on the sale of water meters after building permit issuance.

- **Exaction:** The developer is required to finance, construct, dedicate water and recycled water facilities that serve only their development to the OWD.

### **Potable Water Improvement Costs**

The total capital cost for potable water facilities will be determined at the time the system is designed and the SAMP is approved. In accordance with District Policy No. 26, the District may provide reimbursement for construction and design costs associated with development of these improvements.

### **Recycled Water Improvement Costs**

The total capital cost for recycled water facilities will be determined at the time the system is designed and the SAMP is approved. The District may provide reimbursement for construction and design costs associated with development of these improvements.

## X.8 **Threshold Compliance**

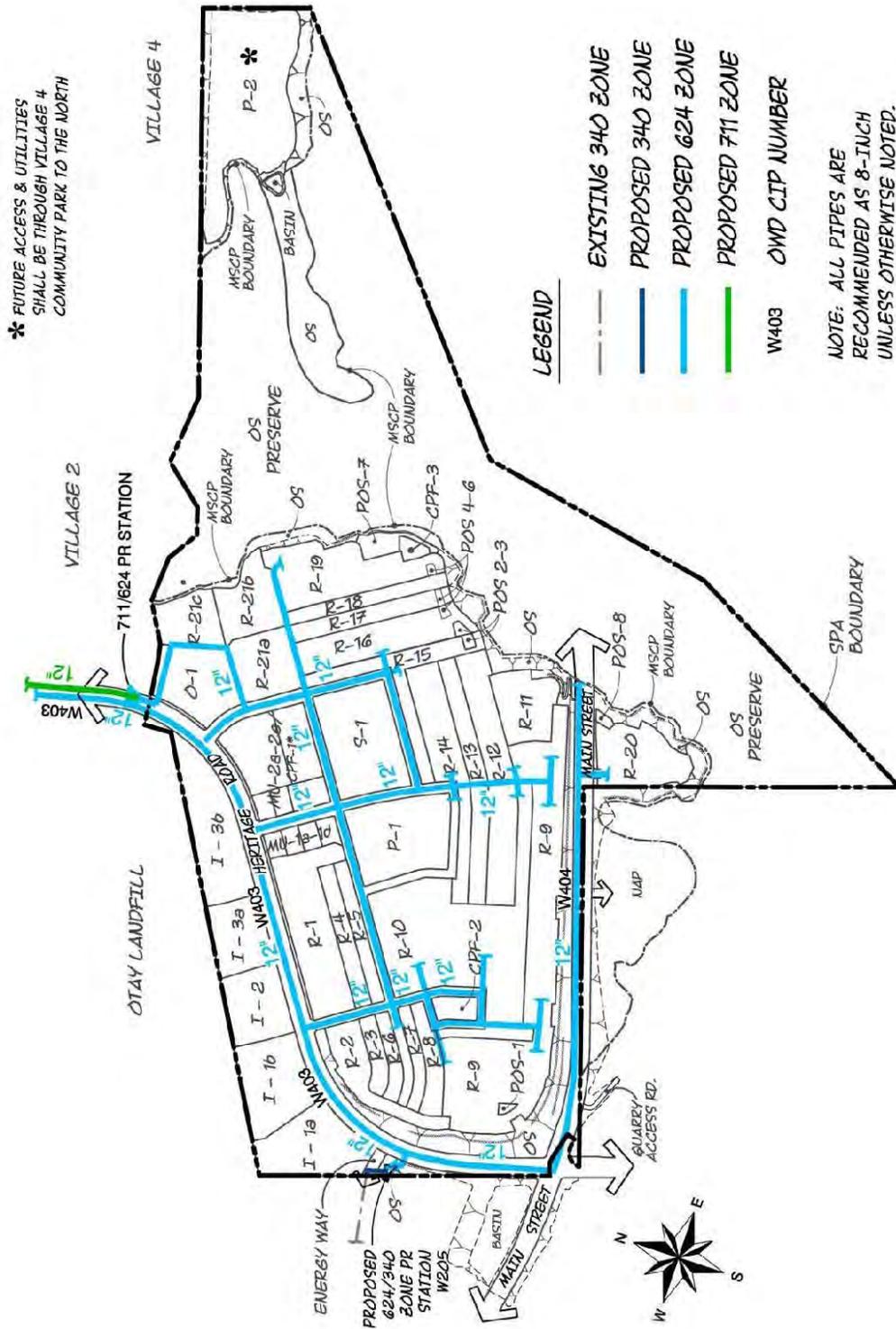
- A. The OWD WSA&V Report documents that sufficient water supplies are planned for and are intended to be acquired, as well as the actions necessary and status to develop these supplies, to meet projected water demands of the University Villages project, which includes Village 3 North & portion of Village 4, as well as existing and other reasonably foreseeable planned development projects within the OWD for a 20-year planning horizon, in normal and in single and multiple dry years.
- B. Prior to approval of the first Final Map for the Project, the Applicant(s) shall provide the City with a Village 3 North and a Portion of Village 4 Subarea Master Plan(s) (SAMP) for potable, recycled, and fire flow water, as approved by Otay Water District (OWD). Applicant(s) shall bond and construct for all on-site and off-site water facilities in accordance with the SAMP. The SAMP shall be consistent with the SPA Plan.
- C. The Village 3 North & portion of 4 SPA Plan will develop in several phases although the precise order in which facilities will be constructed are not known at this time. At the time the SAMP is prepared for the project, more detailed information on the project phasing will be presented. At any given stage of development, the developer will be required to verify that the proposed water system will be capable of meeting the fire flow requirements that are in effect. The following discussion presents the major phases consistent with Exhibit 4 and a description of the water facilities required to serve each individual phase of the project.

1. Yellow Phase: The Yellow Phase includes Planning Areas I-1, I-2, I-3, and I-4. Development in this area is all industrial. This area of the project is in the 624 Zone. The 624 Zone development can be served by connecting to the existing 12-inch line in Heritage Road and providing adequate looping to the development area.
  2. Green Phase: The Green Phase is located in the north end of the project and includes Planning Areas R-21a, R-21b, R-21c, MU-1a-1d, MU-2a-2f, CPF-1, O-1, P-1, and S-1. This area includes development of 595 residential units. This area is within the 624 Zone and can be served by constructing the 12-inch line in Heritage Road and providing adequate looping to the development area.
  3. Red Phase: The Red Phase is located in the southwest portion of project and includes Planning Areas R-1 through R-10 and CPF-2. Development in this area includes 547 residential units. Development in this area is within the 624 Zone and requires looped connections to the 624 Zone north of the project
  4. Blue Phase: The Blue Phase is located in the southern portion of the project and includes Planning Areas R-11 through R-20 and CPF-3. This area includes the development of 455 residential units. To provide water service to this area of the project, 12-inch 624 Zone water lines will need to be constructed from the north to connect to the existing system in Village 2.
  5. Purple Phase: The Purple Phase is located within a portion of Village 4 and includes P-2. This area of the project will be served by utilities from the future Village 4 community park site to the north.
- D. The project applicant shall comply with the Project EIR Water Utility mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The UTL designations correspond to the Project EIR numbered Utility measures:
- UTL-1** Prior to issuance of each Final Map, the permit applicant/developer shall deliver to the City service availability letters from the OWD.
  - UTL-2** Prior to approval of the first Final Map, the applicant shall provide a SAMP to the Otay Water District. Water facilities improvements shall be financed or installed on-site and off-site in accordance with the fees and phasing pursuant to the PFFP and the SAMP.
  - UTL-3** Prior to approval of the first Final Map, the applicant shall obtain the OWD's approval of the SAMP for both potable and recycled water. Any on-site and off-site facilities identified in the SAMP required to serve a final mapped area, including but not limited to water facilities within the SR-125 overcrossing at Otay Valley Road, shall be secured or constructed by the Applicant prior to approval of the Final Map and in accordance with the phasing in the PFFP.
  - UTL-4** Prior to design review approval in accordance with the Density Transfer provision in the Village 3 North & portion of Village 4 SPA Plan, the applicant/developer shall provide an update to the Overview of Water Service for Otay Ranch University Villages (Dexter Wilson, 2014) with each proposed project requesting a density transfer. The density transfer technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site water infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site water supply infrastructure to accommodate flows.

Table I.6 Village 3 North Water Facility Phasing Summary					
Phase	Planning Area	Zone	In-Phase Water Improvements	Other Phase Water Improvements	Off-Site Water Improvements
Yellow	I-1, I-2, I-3, and I-4	624	<ul style="list-style-type: none"> <li>12" line in Heritage Road</li> </ul>	<ul style="list-style-type: none"> <li>12" secondary feed through Green Phase</li> </ul>	<ul style="list-style-type: none"> <li>12" 624 Zone line in Heritage Road</li> <li>12" 711 Zone line in Village 2 to R-21</li> <li>711/624 Zone PR Station</li> </ul>
Green	R-21a,b,c, MU-1, MU-2, O-1, P-1, CPF-1, and S-1	624	<ul style="list-style-type: none"> <li>12" loop through R-21</li> <li>Internal looping</li> </ul>	<ul style="list-style-type: none"> <li>Portion of 12" line in Heritage Road in Yellow Phase</li> </ul>	<ul style="list-style-type: none"> <li>12" 624 Zone line in Heritage Road</li> <li>12" 711 Zone line in Village 2 to R-21</li> <li>711/624 Zone PR Station</li> </ul>
Red	R-1 through R-10 and CPF-2	624	<ul style="list-style-type: none"> <li>12" line in Heritage Road</li> <li>624/340 Zone PR Station<sup>1</sup></li> <li>Internal looping</li> </ul>	<ul style="list-style-type: none"> <li>12" line in Heritage Road in Yellow Phase</li> <li>12" secondary feed through Green Phase</li> </ul>	<ul style="list-style-type: none"> <li>12" 624 Zone line in Heritage Road</li> <li>12" 711 Zone line in Village 2 to R-21</li> <li>711/624 Zone PR Station</li> </ul>
Blue	R-11 through R-21, R-23, and CPF-2	624	<ul style="list-style-type: none"> <li>12" line in Main Street</li> <li>Internal looping</li> </ul>	<ul style="list-style-type: none"> <li>Portion of 12" line in Heritage Road in Yellow Phase</li> <li>12" Feeds through Green Phase</li> </ul>	<ul style="list-style-type: none"> <li>12" 711 Zone line in Heritage Road</li> <li>12" 624 Zone line in Village 2 to R-21</li> <li>711/624 Zone PR Station</li> </ul>
Purple	P-2	711	-----	-----	-----

<sup>1</sup> This PR station does not provide service to Village 3 North and can be constructed at any time after 12-inch line in Heritage Road is installed.

Source: Dexter Wilson Water Study



X

Source: Otay Ranch Village 3 North and a portion of Village 4 SPA Plan, July 25, 2014

## Proposed Potable Water Exhibit 9



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## **XI. SEWER**

### **XI.1. Threshold Standard**

- A. Sewage flows and volumes shall not exceed City Engineering Standards as set forth in the subdivision manual adopted by city council Resolution No. 11175 on February 12, 1983, as may be amended from time to time.
- B. The City will annually provide the City of San Diego Metropolitan Wastewater Department with a 12-18 month development forecast and request confirmation that the projection is within the City's purchased capacity rights and an evaluation of their ability to accommodate the forecast and continuing growth or the city engineering department staff shall gather the necessary data. The information provided to the GMOC shall include the following:
  - 1. Amount of current capacity now used or committed.
  - 2. Ability of affected facilities to absorb forecast growth.
  - 3. Evaluation of funding and site availability for projected new facilities.
  - 4. Other relevant information.

### **XI.2 Service Analysis**

The Sewer Threshold Standard was developed to maintain healthful, sanitary sewer collection and disposal systems for the City of Chula Vista. Individual projects are required to provide necessary improvements consistent with the City of Chula Vista Wastewater Master Plan dated May 2005 and shall comply with all city engineering standards.

The City of San Diego Metro provides sewer treatment services for the City of Chula Vista in accordance with the terms of a multi-agency agreement (Metro Agreement). The Metro system currently has adequate sewage treatment capacity to serve the region until approximately 2025. In the City of Chula Vista, Development shall not occur without adequate sewer capacity, which is determined by the City Engineer. Building permits will not be issued if the City Engineer has determined that adequate sewer capacity does not exist. All development must comply with the Municipal Code, specifically Municipal Code sections 19.09.010(A) 6 and 13.14.030. Chula Vista oversees the construction, maintenance and the operation of the sewer trunk line system.

The source of information regarding the existing and recommended sewer facilities in this PFFP is from the *Overview of Sewer Service for Otay Ranch Villages 3 North, A Portion of 4, 8 East, and 10, May 2014* by Dexter Wilson Engineering, Inc. This study is referred to as the Dexter Wilson Sewer Study throughout this PFFP.

The Village 3 North & portion of 4 SPA Plan project is planned as a mixed density residential community of 1,597 dwelling units. With supporting uses that include an elementary school, a neighborhood park, community purpose facilities, and open space. Residential products will include single-family detached and multi-family units.

### **XI.3 Project Processing Requirements**

The SPA Plan and the PFFP are required by the Growth Management Program to address the following issues for Sewer Services:

- A. Identify phased demands for all sewer trunk lines in conformance with the street improvements and in coordination with the construction of water facilities.
- B. Identify location of facilities for onsite and offsite improvements, including reclaimed water facilities, in conformance with the Wilson Study.
- C. Provide cost estimates for all facilities and proposed financing responsibilities.
- D. Identify financing methods.

### **XI.4 Existing Conditions**

The City of Chula Vista provides the sewer service for the Village 3 North & portion of 4 SPA Plan development. The Project is within the Salt Creek Sewer Basin. The Salt Creek Interceptor was constructed, and completed approximately 7 years ago, to serve regional development in the area of the project. This interceptor starts as a 15-inch line in Hunted Parkway within the Rolling Hills Ranch project. From there, the line increases in size as it heads south along Salt Creek. The interceptor then turns westerly and follows the Otay River to a point of connection with the City of San Diego Metro Sewer System. At the location where the Salt Creek Interceptor passes south of Village 10, this line is 30-inches in size. The line increases to 36-inch south of Village 8 East and to 42-inch south of Village 3 North.

All sewage generated within the City of Chula Vista is currently conveyed to the City of San Diego Metro Sewer System for treatment and disposal. The Metro sewer system treats wastewater from the City of San Diego and 15 other cities and districts, including Chula Vista. Flows are conveyed to the Point Loma Wastewater Treatment plant which has a capacity of 240 mgd and currently treats approximately 180 mgd.

The City of Chula Vista has capacity rights of 20.864 mgd in the Metro sewer system. Current flows in the City average approximately 16.2 mgd. While this excess available capacity is not anticipated to be adequate to serve ultimate buildout needs of the City, the current available capacity represents approximately 17,600 EDUs that can be connected to the system before the capacity is used up. Discussion on how the City will meet their buildout treatment needs is provided in the Dexter Wilson Sewer study and summarized in this PFFP.

### **XI.5 Adequacy Analysis**

Sewer flows generated by the project were estimated by Dexter Wilson Engineering. Their estimates were based on current city planning criteria for the permanent and interim on-site sewer system conditions. These estimated flows are the basis for design of new sewer facilities and the evaluation of existing facilities that will serve the project.

#### **A. Wastewater Treatment:**

In accordance with the City of Chula Vista Subdivision Manual, Dexter Wilson Engineering used the City's sewage generation rate to estimate the total annual average wastewater flows produced from the project (see Table J.1).

<b>Table J.1 City of Chula Vista Sewage Generation Factors</b>	
<b>Land Use</b>	<b>Average Flow Factor</b>
Single Family Residential	265 gpd/unit
Multi-Family Residential	198.75 gpd/unit
Commercial/ Industrial	2,500 gpd/acre
Community Purpose Facilities	2,500 gpd/acre
Elementary Schools	15 gpd/student
Junior & High Schools	20 gpd/student
Parks	500 gpd/acre

Dexter Wilson 2014

On-site and off-site collection, trunk, and interceptor facilities were evaluated in the Dexter Wilson Sewer Study based on this sewage flow. In addition, the City's design criteria were used for the analysis of the existing sewer system as well as for design and sizing of proposed improvements and expansions to the system to accommodate the flows anticipated to be generated by the University Villages Project, which includes Village 3 North & portion of 4 SPA Plan.

The City of Chula Vista's Projected Sewage Flow and Treatment Capacity is shown on Table J.2 considers the projected growth between 2012 and 2017.

<b>Table J.2 Chula Vista Projected Sewage Flow and Treatment Capacity</b>					
<b>Million Gallons per Day (MGD)</b>	<b>FY 10/11</b>	<b>FY 11/12</b>	<b>18-month Projection</b>	<b>5-year Projection</b>	<b>"Build-out" Projection*</b>
<b>Average Flow</b>	16.272	15.935	16.853**	17.948**	26.2*
<b>Capacity</b>	20.864	20.864	20.864	20.864	20.864
* Buildout Projection based on 2005 Chula Vista Wastewater Master Plan					
** Growth rate per the "Residential Growth Forecast Years 2012 through 2016"					

Source: GMOC 2013 Annual Report

The City of Chula Vista currently has capacity rights of 20.864 mgd of flow in the Metro sewer system. Existing average flows in the City are approximately 16 mgd. The estimated year 2030 flows based on the 2005 General Plan were 23.3 mgd. However, densification in the 2010 General Plan Update, the projected year 2030 average flow for the preferred alternative increased the flow to approximately 26.222 mgd. Therefore, the City of Chula Vista is required to acquire capacity rights for an additional approximate 5.358 mgd to accommodate year 2030 flows. *The Salt Creek Interceptor Technical Sewer Study for the South Otay Ranch, prepared by Atkins (formerly PBS&J) in November 2010* as a supporting document to the 2010 General Plan Amendment EIR addresses the City's current projections regarding the need to acquire additional treatment plant capacity in the future. The total future treatment capacity at full buildout, including the proposed project, is approximately 32.548 mgd, leaving approximately 11.684 mgd that needs to be acquired above the City's current capacity rights. The City of Chula Vista may acquire additional capacity rights in the Metro system through negotiations with the City of San Diego, but there are other alternatives that the City of Chula Vista is evaluating including the construction of a new wastewater treatment plant to meet its

future treatment capacity and disposal requirements. Building permits for new development projects will be issued only if the City Engineer has determined that adequate sewer capacity exists.

The Dexter Wilson Sewer Study reviewed the aforementioned 2010 PBS&J study that provided EDU projections based on the 2005 General Plan and based on current land use agreements. Table J.3 summarizes the University Villages data from the PBS&J report, which provides information on the adjacent University Villages as well. Table J.3 provides a comparison of the University Villages Project projections. The projections for the portion of Village 4 were not included in this table since they are not part of the Village 3 projections from the PBS&J Report.

<b>Table J.3</b> <b>Otay Ranch University Villages</b> <b>(Village 3 North, Village 8 East &amp; Village 10)</b> <b>EDU Summary</b>								
Description	EDUs			Average Flow, mgd			Total	
	Village 3 North	Village 8 East	Village 10	Village 3 North	Village 8 East	Village 10	EDUs	Average Flow, mgd
<b>October 2010 PBS&amp;J Report</b>								
Baseline <sup>1</sup> (PBS&J)	2138.7	1957.8	1713.2	0.567	0.519	0.454	5809.7	1.540
Cumulative <sup>2</sup> (PBS&J)	2094.4	2507.4	2248.8	0.555	0.664	0.596	6850.6	1.815
<b>Net Change (PBS&amp;J)</b>	<b>(44.3)</b>	<b>549.6</b>	<b>535.6</b>	<b>(0.012)</b>	<b>0.145</b>	<b>0.142</b>	<b>1040.9</b>	<b>0.275</b>
<b>Current University Villages</b>								
Baseline <sup>1</sup>	2138.7	1957.8	1713.2	0.567	0.519	0.454	5809.7	1.540
Current Proposed (Table 2-2)	1986 <sup>3</sup>	3206	1573	0.526 <sup>3</sup>	0.850	0.417	6765 <sup>3</sup>	1.793 <sup>3</sup>
<b>Net Change</b>	<b>(152.7)</b>	<b>1248.2</b>	<b>(140.2)</b>	<b>(0.041)</b>	<b>0.331</b>	<b>(0.037)</b>	<b>955.3</b>	<b>0.253</b>
<b>Cumulative</b>								
Baseline <sup>1</sup>	2138.7	1957.8	1713.2	0.567	0.519	0.454	5809.7	1.540
University Villages	1986 <sup>3</sup>	3206	1573	0.526 <sup>3</sup>	0.850	0.417	6765 <sup>3</sup>	1.793 <sup>3</sup>
Village 2 SPA Amend <sup>4</sup>	484	0	0	0.128	0	0	484	0.128
<b>Net Change</b>	<b>331.3</b>	<b>1248.2</b>	<b>(140.2)</b>	<b>0.087</b>	<b>0.331</b>	<b>(0.037)</b>	<b>1439.3</b>	<b>0.381</b>
<sup>1</sup> The Baseline Condition in the PBS&J report is defined as from land use projections in the 2005 Sewer Master Plan as updated to reflect the adopted 2005 General Plan. <sup>2</sup> The Cumulative Condition in the PBS&J report is defined as the Baseline Condition plus the cumulative impact of any reasonably foreseeable project. <sup>3</sup> Does not include P-2 flows since these areas are in Village 4 and are projected as part of Village 4 in the PBS&J study. <sup>4</sup> The March 4, 2014 Sewer System Analysis for the Village 2 SPA Amendment projects an increased flow of 128,315 gpd from the baseline condition								

*Source: Dexter Wilson Sewer Study*

Table J.3 indicates that the densification as proposed by the University Villages Project, which includes the Village 3 North & portion of 4 SPA Plan will require the City to obtain an additional 0.275 mgd of treatment capacity. Based on projections in the Dexter Wilson Sewer Study, the proposed University Villages project would decrease the additional capacity required for the project from 0.275 mgd to 0.253 mgd. For the cumulative condition, the table includes the Village 2 SPA Amendment that requires a treatment capacity of 0.381 mgd.

**B. Salt Creek Interceptor:**

The Salt Creek Interceptor was completed approximately 7 years ago to serve regional development in the area, which includes the Village 3 North & portion of 4, Village 8 East, and the Village 10 projects. Reimbursement to the City for the construction cost of the Salt Creek Interceptor comes from development that connects to this line. New development must pay a development impact fee. Ordinance 2974 provides the fees to be collected by the City for properties to be served by the Salt Creek Interceptor. Table J.8 summarizes the estimated Salt Creek Sewer impact fees to be paid by the Village 3 North & portion of 4 SPA Project.

The Dexter Wilson Sewer Study analyzed the cumulative flows of the Salt Creek Interceptor at the points of connection in comparison to the 2010 PBS&J Study (see Table J.4). Downstream of the connection of Village 3 North/Village 2 the maximum depth to Diameter (d/D ratio), is identified in the current cumulative condition of the 2010 PBS&J Study. The increased flow from these projects represents less than 1.0 percent of the total flows in the analyzed sections of the line. Refer to the Dexter Wilson Sewer Study for specific Node locations and design calculations.

Village	Location of Connection to Salt Creek Interceptor		Depth to Diameter (d/D Ratio)	
	Per PBS&J Study	Per Current Plan	Per PBS&J Study	Per Current Development Plan
10	Node 272	Node 222	0.62 <sup>2</sup>	0.60 <sup>2</sup>
8 East	Node 202	Node 202	0.44 <sup>3</sup>	0.44 <sup>3</sup>
3 North	Node 149	Node 371 <sup>1</sup>	0.36 <sup>4</sup>	0.36 <sup>4</sup>

<sup>1</sup> Node 371 is the first node downstream of Node 149.  
<sup>2</sup> From Node 222 to Node 220  
<sup>3</sup> From Node 202 to Node 200  
<sup>4</sup> From Node 371 to Node 145

*Source: Dexter Wilson Sewer Study*

**C. Village 3 North Sewer Flows:**

According to the Dexter Wilson Sewer Study the projected flows from the Village 3 North SPA Plan area are 526,355 gpd as shown in Table J.5. There may be minor variations between Table J.5 and the Site Utilization Plan regarding the total number of EDU's will remain substantially the same. The SPA Plan proposes a maximum of 1,597 Dwelling Units.

**Table J.5  
Village 3 & a Portion of 4  
Projected Sewer Flows**

<b>Planning Area</b>	<b>Land Use</b>	<b>Quantity</b>	<b>Unit Flow</b>	<b>Total Average Flow, gpd</b>	<b>EDUs<sup>1</sup></b>
R-1	SF	74 units	265 gpd/unit	19,610	74
R-2	SF	34 units	265 gpd/unit	9,010	34
R-3	SF	14 units	265 gpd/unit	3,710	14
R-4	SF	25 units	265 gpd/unit	6,625	25
R-5	SF	25 units	265 gpd/unit	6,625	25
R-6	SF	16 units	265 gpd/unit	4,240	16
R-7	SF	19 units	265 gpd/unit	5,035	19
R-8	SF	21 units	265 gpd/unit	5,565	21
R-9	SF	149 units	265 gpd/unit	39,485	149
R-10	SF	170 units	265 gpd/unit	45,050	170
R-11	SF	27 units	265 gpd/unit	7,155	27
R-12	SF	70 units	265 gpd/unit	18,550	70
R-13	SF	46 units	265 gpd/unit	12,190	46
R-14	SF	67 units	265 gpd/unit	17,755	67
R-15	SF	51 units	265 gpd/unit	13,515	51
R-16	SF	54 units	265 gpd/unit	14,310	54
R-17	SF	26 units	265 gpd/unit	6,890	26
R-18	SF	19 units	265 gpd/unit	5,035	19
R-19	SF	51 units	265 gpd/unit	13,515	51
R-20	SF	44 units	265 gpd/unit	11,660	44
R-21a	MF	190 units	198.75 gpd/unit	37,760	142.5
R-21b	MF	170 units	198.75 gpd/unit	33,790	127.5
R-21c	MF	155 units	198.75 gpd/unit	30,805	116.3
MU-1a-d	MF	80 units	198.75 gpd/unit	15,900	60
MU-1a-d	Commercial	2.1 ac	2,500 gpd/ac	5,250	19.8
MU-2a-f	Commercial	6.1 ac	2,500 gpd/ac	15,250	57.5
IND-1a, b	Industrial	12.5 ac	2,500 gpd/ac	31,250	117.9
IND-2	Industrial	4.4 ac	2,500 gpd/ac	11,000	41.5
IND-3a, b	Industrial	11.7 ac	2,500 gpd/ac	29,250	110.4
IND-4	Industrial	5.2 ac	2,500 gpd/ac	13,000	49.1
S-1	School	948 students	15 gpd/student	14,220	53.7
P-1	Park	7.9 ac	500 gpd/ac	3,950	14.9
P-2	Park (V4)	17.8 ac	500 gpd/ac	8,900	33.6
CPF-1	CPF	2.6 ac	2,500 gpd/ac	6,500	24.5
CPF-2	CPF	1.1 ac	2,500 gpd/ac	2,750	10.4
CPF-3	CPF	0.5 ac	2,500 gpd/ac	1,250	4.7
<b>TOTAL</b>		<b>1,597 units</b>		<b>526,355</b>	<b>1,986</b>

<sup>1</sup> Sewer EDUs are based on 265 gpd/EDU (i.e. Total Average Flow divided by 265 gpd equals the number of EDUs).

*Source: Dexter Wilson Sewer Study*

## **XI.6 Recommended Sewerage Facilities**

Village 3 North area can be served by constructing gravity sewer lines to convey flows south to points of connection with the Salt Creek Interceptor. The project area will be served by constructing onsite gravity sewer lines that convey flow south to Main Street. The sewer lines will convey flow to the intersection of Heritage Road and Main Street where a connection to the Salt Creek Interceptor will be made. Exhibit 11 shows the existing and proposed sewer facilities for the project. The sizing for future sewer lines is preliminary and based on assumed sewer slopes and should be verified during final engineering when slopes of the sewer lines have been established.

The sewer facilities within Heritage Road (within Village 3 North) will require oversizing to accommodate the flows from offsite development in the southern portion of Village 2. Based on the *Overview of Sewer Service for Otay Ranch Villages 3 and a portion of 4, May 2014, Dexter Wilson Engineering Inc.*, a flow of 292,080 gpd will be conveyed from this area. Based on the Sewer System Analysis for the Baldwin and Sons Village 2 SPA Amendment, March 4, 2014, the amendment will result in an increase in sewer flows in the Wolf/Salt Creek basin of 128,315 gpd. Thus, the total projected flow from the southern portion of Village 2 is 420,395 gpd. The Dexter Wilson Sewer Study provides excerpts from the sewer studies used to determine this projected flow.

The sewer line in Main Street also needs to be oversized to accommodate future potential flows from the east. *The Overview of Sewer Service for Village 8 West, November 2010, Dexter Wilson Engineering*, identified total potential average flows of 1,095,841 gpd at the western project boundary. This flow projection includes development within Village 8 West, Village 7, the Village 4 Park and the Eastern Urban Center. Further, between Village 8 West and Village 3 North, Dexter Wilson estimates that the future Village 4 development will have an average flow of 198,750 gpd (750 EDUs). According to the Dexter Wilson Sewer Study, the total offsite average flow that must be considered when sizing the trunk sewer line in Main Street is 1,294,591 gpd.

### **XI.6.1. Improvements**

The recommended onsite sewer lines internal to Village 3 North will range from 8-inch to 12-inch gravity sewers. The required sizing should be verified once pipe slopes have been better defined during the preparation of the tentative map and/or final engineering of the project. Exhibit 11 provides the recommended onsite sewer line sizing for the project.

The portion of Village 4 area contains the P-2 Community Park site. The P-2 site will be served by a sewer lift station, which will be connected to the future sewer line in La Media Road. The La Media Road sewer line will convey flows south through Village 8 West project.

## **XI.6.2. Phasing**

The project is anticipated to develop in several phases generally from north to south, the precise order in which the facilities will develop is not known at this time. The purpose of this section is to present the major phases of the project and provide a description of the sewer facilities required to serve each individual phase.

### **A. Yellow Phase**

The Yellow Phase includes Planning Areas I-1, I-2, I-3, and I-4. Development in this area is all industrial. This development can be served by constructing a new sewer line in Heritage Road and connecting to the Salt Creek Interceptor at Main Street.

### **B. Green Phase**

The Green Phase is located in the north end of the project and includes Planning Areas R-21a, R-21b, MU-1a-1d, MU-2a-2f, O-1, P-1, CPF-1, and S-1. This area includes development of 595 residential units. This area can be served by constructing the sewer line in Heritage Road and extending it to the connection to the Salt Creek Interceptor at Main Street.

### **C. Red Phase**

The Red Phase is located in the southwest portion of the project and includes Planning Areas R-1 through R-10 and CPF-2. Development in this area includes 547 residential units. Development in this area can be served by constructing the downstream portion of the Heritage Road sewer line and connecting to the Salt Creek Interceptor at Main Street.

### **D. Blue Phase**

The Blue Phase is located in the southern portion of the project and includes Planning Areas R-11 through R-20, and CPF-3. This area includes the development of 455 residential units. To provide sewer service to this area of the project, the sewer line in Heritage Road and connection to the Salt Creek Interceptor will need to be made. Sewer lines to convey west to Heritage Road will also be required.

### **E. Purple Phase**

The Purple Phase is located within a portion of Village 4 and includes P-2. This area of the project can be served by constructing a sewer lift station pursuant to Council Policy, and connecting to the future sewer line in La Media Road that will convey flow south through Village 8 West.

Table J.6 provides a summary of proposed sewer system improvements by phase for Village 3 North.

<b>Table J.6 Village 3 North Sewer Facility Phasing Summary</b>			
<b>Phase</b>	<b>Planning Area</b>	<b>In-Phase Sewer Improvements</b>	<b>Other Phase Sewer Improvements</b>
Yellow	I-1, I-2, I-3, and I-4	<ul style="list-style-type: none"> <li>Sewer line in Heritage Road</li> </ul>	<ul style="list-style-type: none"> <li>Sewer line in Heritage Road in Red Phase</li> <li>Connection to Salt Creek Interceptor</li> </ul>
Green	R-21a,b,c, MU-1, MU-2, CPF-1, O-1, P-1, and S-1	<ul style="list-style-type: none"> <li>Internal Sewer Lines</li> </ul>	<ul style="list-style-type: none"> <li>Sewer line in Heritage Road in Red and Yellow Phases</li> <li>Backbone sewer lines through Red Phase</li> <li>Connection to Salt Creek Interceptor</li> </ul>
Red	R-1 through R-10 and CPF-2	<ul style="list-style-type: none"> <li>Sewer line in Heritage Road</li> <li>Connection to Salt Creek Interceptor</li> <li>Internal Sewer Lines</li> </ul>	-----
Blue	R-11 through R-20, and CPF-3	<ul style="list-style-type: none"> <li>Sewer line in Main Street</li> <li>Internal Sewer Lines</li> </ul>	<ul style="list-style-type: none"> <li>Backbone sewer lines in Red Phase</li> <li>Sewer line in Green Phase south of P-1</li> <li>Connection to Salt Creek Interceptor</li> </ul>
Purple	P-2	<ul style="list-style-type: none"> <li>Sewer Lift Station - financed by Developer.</li> </ul>	-----

Source: Dexter Wilson Sewer Study

#### **XI.7. Financing Sewerage Facilities**

To fund the necessary improvements to the Salt Creek Interceptor, development impact fees have been established by the City of Chula Vista. A discussion of the required fees is provided below.

The *Salt Creek Basin Study by Wilson Engineering, November 1994* established a fee to fund future improvements to the Salt Creek Interceptor System. This fee is required to be paid by all future developments within the Salt Creek Drainage Basin to fund improvements required to serve ultimate development within the drainage basin. City of Chula Vista Ordinance Number 2617 established the fee to be paid for future development within the Salt Creek Basin that connects into the existing system. Table J.8 summarizes the current fees to be paid by each land use type. These fees are typically collected at the time building permits are issued.

<b>Table J.7 Salt Creek Sewer Impact Fees</b>		
<b>Land Use</b>	<b>EDU Factor</b>	<b>Fee \$</b>
Single Family-Residential	1.0 EDU/unit	1,330/unit
Multi-Family Residential	0.75 EDU/unit	997.5/unit
Commercial/Industrial	9.43 EDU/acre	12,541.9/acre
CPF	9.43 EDU/acre	12,541.9/acre
Elementary School	0.06 EDU/student	79.8/student
Parks	1.89 EDU/acre	2,513.7/acre

The project estimated Salt Creek Basin Fee is \$26,611,248 (see Table J.8). The estimated fee may change depending upon the final number of dwelling units, changes in acreages and/or fee revisions by the City Council.

Land Use	S/Unit	Red		Blue		Yellow		Green		Purple		Total	
		EDU	Fee/Phase	EDU	Fee/Phase	EDU	Fee/Phase	EDU	Fee/Phase	EDU	Fee/Phase		
R-1	SFD	\$1,330	74	\$98,420	0	\$0	0	\$0	0	\$0		\$98,420	
R-2	SFD	\$1,330	34	\$45,220	0	\$0	0	\$0	0	\$0		\$45,220	
R-3	SFD	\$1,330	14	\$18,620	0	\$0	0	\$0	0	\$0		\$18,620	
R-4	SFD	\$1,330	25	\$33,250	0	\$0	0	\$0	0	\$0		\$33,250	
R-5	SFD	\$1,330	25	\$33,250	0	\$0	0	\$0	0	\$0		\$33,250	
R-6	SFD	\$1,330	16	\$21,280	0	\$0	0	\$0	0	\$0		\$21,280	
R-7	SFD	\$1,330	19	\$25,270	0	\$0	0	\$0	0	\$0		\$25,270	
R-8	SFD	\$1,330	21	\$27,930	0	\$0	0	\$0	0	\$0		\$27,930	
R-9	SFD	\$1,330	98	\$130,340	51	\$67,830	0	\$0	0	\$0		\$198,170	
R-10	SFD	\$1,330	155	\$206,150	15	\$19,950	0	\$0	0	\$0		\$226,100	
R-11	SFD	\$1,330	0	\$0	27	\$35,910	0	\$0	0	\$0		\$35,910	
R-12	SFD	\$1,330	0	\$0	70	\$93,100	0	\$0	0	\$0		\$93,100	
R-13	SFD	\$1,330	0	\$0	46	\$61,180	0	\$0	0	\$0		\$61,180	
R-14	SFD	\$1,330	0	\$0	67	\$89,110	0	\$0	0	\$0		\$89,110	
R-15	SFD	\$1,330	0	\$0	51	\$67,830	0	\$0	0	\$0		\$67,830	
R-16	SFD	\$1,330	0	\$0	54	\$71,820	0	\$0	0	\$0		\$71,820	
R-17	SFD	\$1,330	0	\$0	26	\$34,580	0	\$0	0	\$0		\$34,580	
R-18	SFD	\$1,330	0	\$0	19	\$25,270	0	\$0	0	\$0		\$25,270	
R-19	SFD	\$1,330	0	\$0	51	\$67,830	0	\$0	0	\$0		\$67,830	
R-20	SFD	\$1,330	0	\$0	44	\$58,520	0	\$0	0	\$0		\$58,520	
R-21	MF	\$997.5	0	\$0	0	\$0	0	\$0	515	\$513,713		\$513,713	
MU-1	MF	\$997.5	0	\$0	0	\$0	0	\$0	80	\$79,800		\$79,800	
Subtotal			481	\$639,730	521	\$692,930	0	\$0	595	\$593,513	0	\$0	\$1,926,173
		\$/acre											
MU-2	MU	\$12,541.9	0	\$0	0	\$0	0	\$0	6.1	\$76,506	0	\$0	\$76,506
O-1	O	\$12,541.9	0	\$0	0	\$0	0	\$0	5.2	\$65,218	0	\$0	\$65,218
CPF-1	CPF	\$12,541.9	0	\$0	0	\$0	0	\$0	2.6	\$32,609	0	\$0	\$32,609
CPF-2	CPF	\$12,541.9	1.1	\$13,796	0	\$0	0.0	\$0	0.0	\$0	0	\$0	\$13,796
CPF-3	CPF	\$12,541.9	0	\$0	0.5	\$6,271	0	\$0	0.0	\$0	0.6	\$7,525	\$13,796
P-1	N.P.	\$2,513.7	0	\$0	0	\$0	0	\$0	7.9	\$19,858	0	\$0	\$19,858
P-2	C.P.	\$2,513.7	0	\$0	0	\$0	0	\$0	0.0	\$0	17.8	\$44,744	\$44,744
I-1a	Ind.	\$12,541.9		\$0		\$0	6.1	\$80,268		\$0		\$0	\$80,268
I-1b	Ind.	\$12,541.9		\$0		\$0	6.1	\$76,506		\$0		\$0	\$76,506
I-2	Ind.	\$12,541.9		\$0		\$0	4.4	\$55,184		\$0		\$0	\$55,184
I-3a	Ind.	\$12,541.9		\$0		\$0	4.2	\$52,676		\$0		\$0	\$52,676
I-3b	Ind.	\$12,541.9		\$0		\$0	7.5	\$94,064		\$0		\$0	\$94,064
Subtotal				\$13,796		\$6,271		\$358,698		\$194,191		\$52,269	\$625,225
		\$/student							student				
S-1	Elem.	\$79.8		\$0		\$0		\$0	750	\$59,850		\$0	\$59,850
<b>Total</b>				<b>\$653,526</b>		<b>\$699,201</b>		<b>\$438,967</b>		<b>\$787,703</b>		<b>\$52,269</b>	<b>\$2,611,248</b>

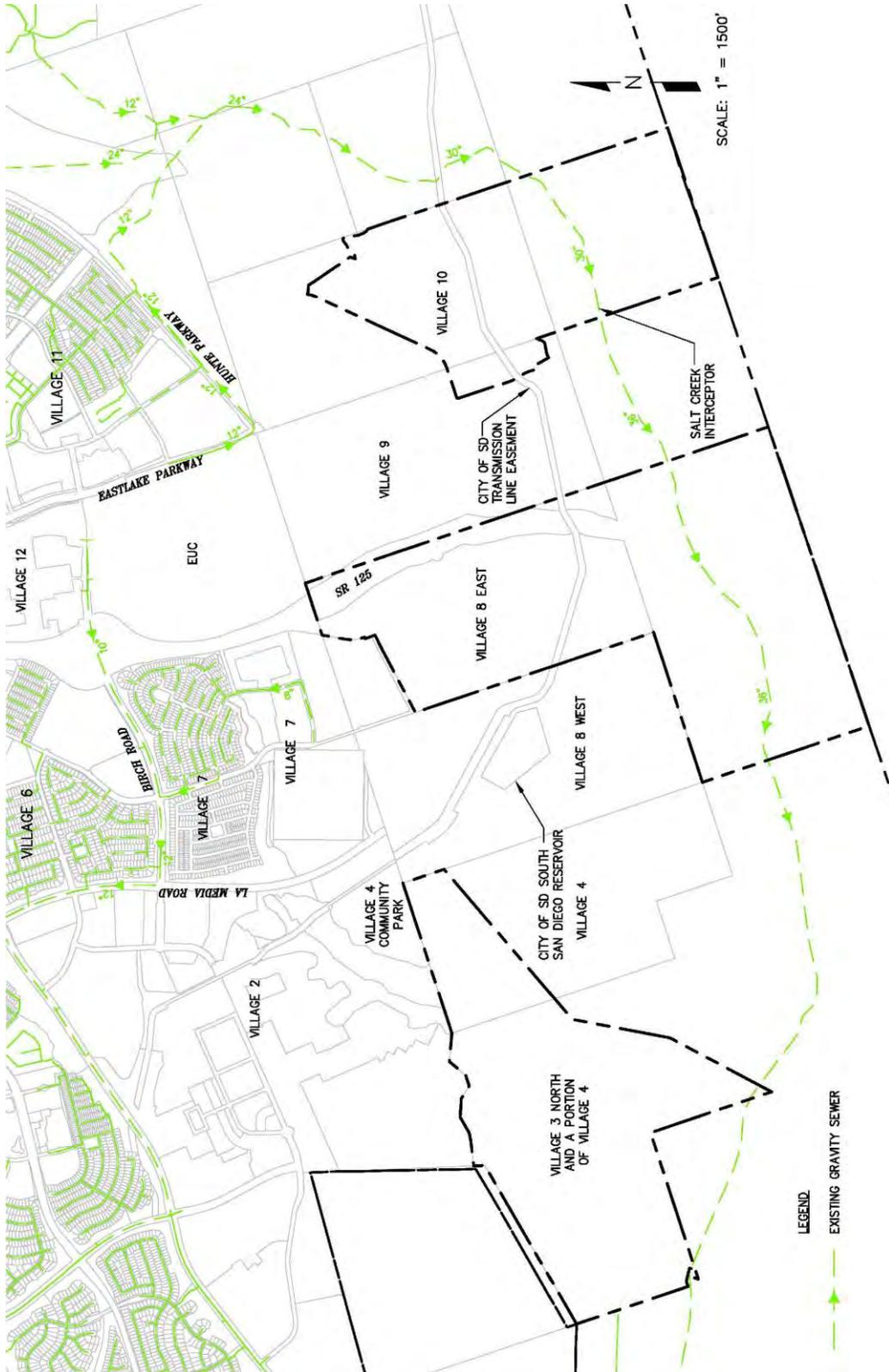
### **XI.8. Threshold Compliance**

- A. The City of Chula Vista would need to acquire capacity rights for an additional 5.4 mgd to accommodate year 2030 flows. The Salt Creek Interceptor Technical Sewer Study for South Otay Ranch addresses the City's current projections regarding the need to acquire additional treatment capacity. The City may acquire rights for this additional capacity in the Metro system through negotiations with the City of San Diego. In addition, the City of Chula Vista is evaluating construction of a new wastewater treatment plant and other

alternatives to meet its future treatment capacity and disposal requirements. The cumulative projects will be timed to proceed with the City's acquisition of additional treatment capacity. Building permits will be issued only if the City Engineer has determined that adequate sewer capacity exists.

Furthermore, all developments are required to prepare a PFFP that articulates needed facilities and funding mechanisms. The proposed project includes a PFFP and requires new and expanded sewer facilities to serve the proposed development. Implementation of existing policies and expanded sewer facilities would therefore avoid significant cumulative impacts associated with inadequate treatment capacity. Mitigation measures are also provided to ensure that adequate wastewater facilities are provided concurrently

- B. Facilities to accommodate sewer flows have been identified in the Dexter Wilson Sewer Study. The construction of new sewer lines must be phased in before the construction of streets.
- C. All gravity sewers will be designed to convey peak wet weather flow. For pipes with diameter of 12 inches and smaller, the sewers will be designed to convey this flow when flowing half full. For pipes of diameter larger than 12 inches, the sewers will be designed to convey peak wet weather flow when flowing at three-fourths of the pipe depth. All new sewers will be designed to maintain a minimum velocity of two feet per second (fps) at design capacity to prevent the deposition of solids.
- D. The applicant for the project shall:
  - 1. Underwrite the cost of all studies and reports required to support the addition of sewer flows to existing lines.
  - 2. Assume the capital cost of all sewer lines and connections identified herein.
  - 3. Pay all current sewer fees required of the City of Chula Vista.
  - 4. Comply with Section 3-303 of the City of Chula Vista Subdivision Manual.
  - 5. Construct off-site connections as required by the City Engineer.
- F. The project applicant shall comply with the Project EIR Sewer Utility mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The following UTL designations correspond to the Project EIR numbered Utility measures:
  - UTL-5** The applicant or designee shall finance or install all on-site and off-site sewer facilities required to serve development in the proposed project in accordance with the fees and phasing in the approved Public Facilities Finance Plan to the satisfaction of the City Engineer.
  - UTL-6** Prior to issuance of each building permit, the applicant or designee shall pay the Salt Creek Development Impact Fee at the rate in effect at the time of building permit issuance and corresponding to the sewer basin that the building will permanently sewer to, unless stated otherwise in a development agreement that has been approved by the City Council.
  - UTL-7** Prior to design review approval in accordance with the Intensity Transfer provision in the Village 3 North & a portion of Village 4 SPA Plan, the applicant or designee shall provide an update to Dexter Wilson Sewer Study with each proposed project requesting an intensity transfer. The technical study shall demonstrate to the satisfaction of the City Engineer that adequate on-site wastewater infrastructure will be available to support the transfer. The transfer of residential density shall be limited by the ability of the on-site sewerage facilities to accommodate flows.



Source: Dexter Wilson Sewer Study

## Existing Sewer Facilities Exhibit 11





Source: Dexter Wilson Sewer Study

## Proposed On-site Sewer Phasing Exhibit 13

## **XII. DRAINAGE**

### **XII.1. Threshold Standard**

- A. Storm water flows and volumes shall not exceed City Engineering Standards as set forth in the Subdivision Manual adopted by City Council Resolution No. 11175 on February 23, 1983, as may be amended from time to time.
- B. The GMOC shall annually review the performance of the city's storm drain system to determine its ability to meet the goals and objectives above.

### **XII.2 Service Analysis**

The City of Chula Vista Public Works Department is responsible for ensuring that safe and efficient storm water drainage systems are provided concurrent with development in order to protect the residents and property within the city. City staff is required to review individual projects to ensure that improvements are provided which are consistent with the drainage master plan(s) and that the project complies with all City engineering drainage standards. *The City of Chula Vista Subdivision Manual; Engineering Department and Land Development; section 3, March 2012*, provides design criteria to comply with city design standards.

The Village 3 North & portion of 4 SPA Plan project is under the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB) and is also subject to the National Pollutant Discharge Elimination System (NPDES) requirements both during and after construction. NPDES requirements stem from the Federal Clean Water Act and are enforced either by the State Water Resources Control Board (SWRCB) or the SDRWQCB. The Project is also subject to the current Hydromodification Management Plan (HMP) standards.

The Village 3 North & portion of 4 SPA Plan Pre-Development and Post-Development Conditions are identified in the *Tentative Map Drainage Study for Otay Ranch Village 3 North and a portion of Village 4 SPA, dated March 7, 2014, by Hunsaker & Associates*. This report is referred to as the Hunsaker Drainage Study in this PFFP. The purpose of the Hunsaker Drainage Study is to prepare hydrologic models to quantify existing and developed condition peak flows to the Otay River.

The treatment of the runoff from the Village 10 SPA project is addressed in the *Master Water Quality Technical Report for Otay Ranch Village 3 North and a portion of Village 4 SPA Tentative Map, dated March 7, 2014, by Hunsaker & Associates*. The Master Water Quality Technical Report (WQTR) will be referred to as the Hunsaker WQTR. The proposed design will utilize on-site Low Impact Development (LID), Best Management Practices (BMPs) and Bioretention Integrated Management Practices (IMP's) Treatment Controls to treat the 85<sup>th</sup> percentile flow from the development.

### **XII.3 Project Processing Requirements**

The SPA Plan and the PFFP are required to address the following issues for drainage issues:

- A. Identify phased demands.
- B. Identify locations of facilities for onsite and offsite improvements.
- C. Provide cost estimates.
- D. Identify financing methods.

The *Development Storm Water Manual (DSWM), 2011, City of Chula Vista* applies to all projects requiring any permit approvals on or after March 24, 2010. The DSWM provides guidance for new development, redevelopment and public projects to achieve compliance with the City of Chula Vista's Standard Urban Storm Water Mitigation Plan (SUSMP). On January 24, 2007, the SDRWQCB adopted Order No. R9-2007-0001, renewing the Municipal Storm Water Permit. This order supersedes Order No. 2001-01 and includes several changes to requirements for post-construction stormwater management and would result in SUSMPs being modified and changes to standards for post-construction stormwater management practices. Specific changes that would directly affect the design of the proposed project include:

- **Low Impact Development (LID) BMP Requirements.** Project applicants with Priority Development Projects (projects subject to SUSMP requirements) are required to implement LID BMPs that collectively minimize directly connected impervious areas and promote infiltration. The LID BMP requirements are described in Section D.1.d. (4) of Order No. R9-2007-0001.
- **Hydromodification.** Limitations on Increases of Runoff Discharge Rates and Durations: Under Section D.1.g of Order No. R9-2007-0001, the Co-permittees would be required to prepare a Hydromodification Management Plan (HMP) and incorporate its requirements into their SUSMPs. Hydromodification refers to changes in a watershed's runoff characteristics resulting from development, together with associated morphological changes to channels receiving the runoff, such as changes in sediment transport characteristics and the hydraulic geometry (width, depth, and slope) of channels. These changes result in streambank erosion and sedimentation, leading to habitat degradation due to loss of overhead cover and loss of in-stream habitat structures.

#### **XII.4. Existing Conditions**

##### **XII.4.1. Surface Hydrology**

Approximately 191 acres within the 436 acre project area consists of Open Space and a Multiple Species Conservation Program (MSCP) preserve area. This open space area will be preserved as undisturbed areas, slopes, and natural drainage courses. The preserve area within the project boundary is located within Wolf Canyon and along the Otay River corridor. The remainder of project site will include single and multi-family residential, mixed use areas, office/commercial areas, parks, a school, community purposes facilities (CPF) sites, industrial development areas, and private open spaces areas.

The Village 3 North site flows south towards the Otay River in both the pre and post developed conditions. According to the Hunsaker Drainage Study, the site lies outside the FEMA floodplain boundary. Therefore, a Letter of Map Revision is not required. The MSCP Open Space Preserve is located immediately south of the site along the Otay River and east of the developed portion of Village 3 North within Wolf Canyon. The project as proposed will not encroach into the MSCP area with the exception of the eastern fringe of the development area, where a portion of Main Street requires encroachments for road improvements, and the proposed storm drain and sewer outfalls, which will have an assigned easement through the preserve. Since the project is located adjacent to a Preserve area it shall adhere to the City's *MSCP Subarea Adjacency Guidelines* pertaining to drainage and water quality.

See the Hunsaker Drainage Study for a detailed description of the methodology used for the computation of design rainfall events, runoff coefficients, and rainfall intensity values. The

criterion used by Hunsaker & Associates is based on the most current San Diego County Hydrology Manual and the City of Chula Vista Subdivision Manual.

The topography for the Village 3 North and portion of 4 project areas are characterized by farmland, rolling hills, vegetation consisting mainly of brush and incised canyons that partition the site into six defined watersheds. The watersheds will be affected by the proposed development. All the existing watersheds currently drain south directly into the Otay River.

The watershed boundary along the northern portion of the site is defined by the grading which has occurred for the Otay Landfill and by the proposed Otay Ranch Village 2 South development at the northeast corner of the site. Existing commercial businesses that consist of vehicle salvage yards and auto parts stores have established the western watershed boundary.

Table K.1 below summarizes the 100-year pre-development peak flows to each of the delineated watersheds. A runoff coefficient of 0.35 and 0.50 was assumed by Hunsaker & Associates for the existing tributary area per the City of Chula Vista Subdivision Manual. These coefficients correspond to farm land and vegetated rolling slopes.

<b>Table K.1 Summary of Pre-Developed Flows to the Otay River</b>		
<b>Discharge Location</b>	<b>Drainage Area (ac)</b>	<b>100-Year Peak Flow (cfs)</b>
Watershed 1	51.58	94.83
Watershed 2	96.72	191.68
Watershed 3	25.81	42.75
Watershed 4	109.98	205.62
Watershed 5	18.98	46.92
<b>Subtotal</b>	<b>303.07</b>	<b>581.80</b>
Watershed 6 (Village 4 portion)	20.43	46.00
<b>Total</b>	<b>323.50</b>	<b>627.8</b>

*Source: Hunsaker Drainage Study*

The Village 4 (P-2 park) portion within the eastern part of the project boundary drains toward the southwest through one of the two canyons that tributary to Wolf Canyon.

## **XII.4.2. Water Quality**

### **A. Surface Water Quality**

The Porter-Cologne Act establishes a comprehensive program for the protection of beneficial uses of the waters of the state (see California Water Code Section 13050(f). Per the code section: “Beneficial uses of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.” The list of the beneficial uses and their definitions for Otay River, Wolf Canyon and San Diego Bay are provided in the Hunsaker WQTR.

On October 30, 2006, the SWRCB approved the Section 303(d) list, which was approved by the EPA on November 30, 2006. The EPA approved the SWRCB's inclusion of all waters and pollutants identified for the San Diego region in its 2006 list of Water Quality Limited Segments. Within the Otay Hydrologic Unit, the San Diego Bay is impaired for pollution from organic compounds. Wolf Canyon and the Otay River are not on the 303(d) list.

Within the Otay Hydrologic Unit, the San Diego Bay is impaired for pollution from organic compounds. Wolf Canyon and the Otay River are not on the 303(d) list.

The *Final Hydromodification Management Plan (HMP), March 2011, County of San Diego*, exempts the Otay River from hydromodification criteria. Due to the combination of low gradients, significant peak attenuation, and wide floodplain areas, similar to those found in the Otay River, there is a low potential for channel erosion. Therefore the proposed outlets into the Otay River are exempt from hydromodification requirements. However, the proposed outlets into Wolf Canyon are not exempt.

Groundwater in the Otay Valley hydrologic area has been identified for following beneficial uses: municipal and domestic water supply, agricultural water supply and industrial service water supply. The Otay Hydrographic Unit contains groundwater that is rated poor to very poor due to high levels of total dissolved solids. No groundwater was encountered during a previous site field testing conducted as part of a Geotechnical Investigation in 2013. Groundwater elevations are dependent on seasonal precipitation, irrigation, and land use, among other factors, and vary as a result.

**B. Flooding**

Per the Flood Insurance Rate Map (FIRM) Nos. 06073C2159F and 06073C2178F, the Village 3 North & portion of 4 SPA Plan development areas are located outside the FEMA floodplain boundary; however, the active recreation area, including Community Park P-2, is within the dam inundation zone.

**XII.5. Proposed Facilities**

**A. Storm Drainage**

The developed Village 3 North & portion of 4 SPA Plan runoff will drain towards the southwest corner of the project area. Storm drain facilities will direct flows from Heritage Road, Main Street, and the residential areas to generally confluence at the intersection of Heritage Road and Main Street. Conceptually, the storm drain system and layout is designed to address peak flows, as well as to integrate water quality features needed to comply with the City of Chula Vista SUSMP requirements for water quality. The proposed storm drain system is designed to prevent the comingling of treated flows with untreated runoff. A cleanout with an internal weir wall will act to divert the 'water quality' amount towards the basin while allowing peak flows to continue downstream and outlet into the Otay River.

LID-based BMPs are proposed to treat the 85th percentile runoff from the project, including Main Street and Heritage Road, prior to discharging to the storm drain. Proposed LID BMPs include conservation of natural areas, minimizing impervious footprint, minimizing directly connected impervious areas to area drains, minimizing soil compaction in landscaped areas, soil amendments, and protection of slopes, channels and erosion control.

Table K.2 summarizes the 100-year developed condition peak flows to each of the discharge locations towards the Otay River. The details and precise discharge locations are provided in the Hunsaker Drainage Study.

<b>Discharge Location</b>	<b>Drainage Area (acres)</b>	<b>100-Year Peak Flow (cfs)</b>
Watershed 1 - Outlet 1A	9.47	22.13
Watershed 1 – Outlet 1B	267.87	704.39
Watershed 2	1.24	4.04
Watershed 3	17.99	37.05
Watershed 4	26.79	47.51
Watershed 5	8.91	22.33
<i>Subtotal</i>	332.27	<b>837.45</b>
Watershed 6 (Village Four Portion)	25.31	24.49
<b>Total</b>	<b>357.58</b>	<b>861.94</b>

*Source: Hunsaker Drainage Study*

The HMP exempts projects that outlet directly to the Otay River from hydromodification criteria. The storm drain discharge locations are therefore exempt from hydromodification requirements except Watershed 6. A hydromodification analysis for Watershed 6 was performed by Hunsaker & Associates since the total watershed acreage increased. No additional measures would be needed to address hydromodification because the proposed condition frequency and duration curves do not exceed those during the existing condition more than 10%, in accordance with the General Permit for Storm Water Discharges. There would not be an increase in potential for erosion for the proposed conditions when compared to existing conditions. Landform grading has been incorporated to mimic existing conditions wherever possible. It is intended for the stormwater from the manufactured slopes to sheet flow and continue along their existing drainage patterns.

Approximately 15.6 acres of a portion of Village 4 pad area from will drain easterly. This area is included in Watershed 6 and is part of the total 25.31 acres shown on Table K.2. The park area is considered self-treating and therefore would be treated onsite. All impervious areas within the park site will be treated by a bioretention facility/facilities which will be sited with improvements plans since the final design of the park is not complete. These facilities would then connect to the proposed storm drain systems located at each end of the park site prior to outletting into the Otay River.

According to the Hunsaker Drainage Study, a temporary desilt basin will be located in the southwest portion of P-2. Runoff from the basin will be conveyed via storm drain east where it will tie into the Village 8 West storm drain system prior to outletting into a tributary of Wolf Canyon and continue downstream towards the Otay River. The area at the point of discharge is referred to as a Point of Compliance (POC). Results of the Hunsaker & Associates hydromodification analysis determined that the POC analyzed passed; therefore, erosion potential would not be increased compared to existing conditions. The proposed condition frequency and duration curves would not exceed those during the existing condition more than ten percent, in

accordance with the General Permit for Storm Water Discharges. This results in no requirements for additional hydromodification mitigation measures. There will not be an increase in potential for erosion as a result of the proposed development in Village 3 North and & portion of 4.

Table K.3 summarizes the effects of site development at the receiving Otay River. Development of Village 3 North and & portion of 4 would result in the net increase of runoff discharged to the adjacent Otay River by approximately 234 cfs.

<b>Table K.3 Summary of Pre vs. Post-Developed Condition Flows to the Otay River</b>		
<b>Discharge Location</b>	<b>Drainage Area (acres)</b>	<b>100-Year Peak Flow (cfs)</b>
Pre-Developed	323.5	627.8
Post-Developed	357.5	861.9
<b>Difference</b>	<b>+34.1</b>	<b>+234.1</b>

\*= Area diverted along eastern project boundary and at bioretention basin.

Source: Hunsaker Drainage Study

The project area is located downstream of the Savage Dam at the Lower Otay Reservoir. According to the Otay River Watershed Management Plan, the Savage Dam impounds runoff from over 60% of the Otay River’s tributary watershed, which reduces the increase in flows from development downstream of the dam compared to the flows prior to dam construction. Detention for any development below the dam would be ineffective since the peak flows from these smaller watersheds would pass well before the reservoir outflows would reach the project area.

The tributary area to the Otay River is over 100 square miles, there would be substantial lag time between the time peak flows from Village 3 North & portion of 4 project would outlet to the river and the time the peak flows would reach the proposed outlet location. According to the Hunsaker Drainage Study, because of this lag time, the development of the project would result in no net increase of flows to the Otay River when compared to existing conditions. Therefore, no detention basins are proposed for this project other than for bioretention and as water quality devices.

Hunsaker & Associates determined that the combination of the proposed construction and permanent LID BMPs that have been incorporated in the design of Village 3 North & portion of 4 project will ensure water quality treatment is maximized throughout the development. However, even with implementation of the project BMPs, the development of Village 3 North & portion of 4 would still have the potential to violate water quality standards or waste discharge requirements. Therefore, impact would be potentially significant and mitigation measures included in the EIR and this PFFP.

All developed areas within the Village 3 North & portion of 4 SPA runoff will receive full water quality treatment prior to discharge from the site, in accordance with the most current City of Chula Vista Storm Water Manual standards applicable at the time of final engineering. The project will be designed to avoid violation of any water quality standards or waste discharge requirements. Details of the proposed storm water treatment design are provided in the Hunsaker WQTR.

The following is a summary of the Hunsaker Drainage Study conclusions:

- Drainage facilities within the Village 3 North & portion of 4 SPA will be designed in accordance with the requirements of the Chula Vista Subdivision Manual, the San Diego County Hydrology Manual and the requirements of the SDRWQCB.
- Peak discharge flows from the project will occur approximately 9.5 minutes after the storm event begins. The peak discharge flow from the Otay River Basin, at the Village 3 North & portion of 4 Outlet, will occur more than 20 hours after the storm event begins. Due to this difference in time, the projects direct, indirect and cumulative impacts within the Otay River are not significant.
- Development of the project site will not further 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.
- Onsite and offsite drainage easements shall be provided to the satisfaction of the Director of Public Works.

#### **B. Storm Water Quality**

Urban runoff discharged from municipal storm water conveyance systems has been identified by local, regional, and national research programs as one of the principal causes of water quality problems in most urban areas. The Municipal Storm Water Pollutant Discharge Elimination System (NPDES) Permit (Municipal Permit), originally issued on February 21, 2001 to the City of Chula Vista, the County of San Diego, the Port of San Diego, and 17 other cities in the region by the SDRWQCB, requires re-issuance every 5 years. The City of Chula Vista and the other aforementioned County jurisdictions must update their development and implementation of storm water regulations every 5 years to address the storm water pollution issues in private and public development planning and construction projects.

The City requires that sufficient information and analysis on how the project will meet the water quality requirements shall be provided as part of the Tentative Map and/or Site Plan review process. In this manner, the type, location, cost, and maintenance characteristics of the selected BMPs will be given consideration during the project planning and design. Therefore, the City requires that prior to approval of any Tentative Map and/or Site Plan for the project, whichever occurs first, the applicant shall obtain the approval of the City Engineer of a Water Quality Technical Report containing specific information and analysis on how the project will meet the requirements of the City of Chula Vista Storm Water and Discharge Control Ordinance and the NPDES Municipal Permit (including the Final Model SUSMP for the San Diego Region).

The Village 3 North & portion of 4 site design includes a bioretention basin in the northwest corner of the Heritage Road and Main Street intersection. The Village 4 Community Park site is self-treating. Hunsaker designed the storm drain system and layout to address peak flows as well as to integrate water quality features needed to

comply with the City of Chula Vista Standard Urban Stormwater Mitigation Plan (SUSMP) requirements for water quality.

The Hunsaker WQTR proposes Low Impact Design (LID) based BMP's to treat the 85<sup>th</sup> percentile runoff from the Village 10 SPA project prior to discharge to the downstream storm drain. The report lists the proposed LID BMPs and the sizing of Bioretention Impact Management Practices (IMP) areas.

Runoff generated by any interim mass graded pad will drain to a desilt basin to be sized and located for each respective pad. For mass graded pads, the only potential pollutant of concern generated by these pads is sediment. Desilt basins will target this sole pollutant prior to discharging flows to the receiving storm drain system. Applicable erosion control measures for permanent stabilization will comply with California Stormwater Quality Association (CASQA) Handbook measures and as indicated by each area's Storm Water Pollution Prevention Plan. Future development of each mass graded pad will be the responsibility of the future builder.

The 85<sup>th</sup> percentile flows generated by the paved streets, sidewalks and other impervious areas for the development of Village 3 North & portion of 4 SPA will receive treatment via bioretention based IMPs, filtering out sediments, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances and oil/hydrocarbons.

After review and analysis of various treatment options, Hunsaker selected the Bioretention IMPs and LID Site Design BMPs that were deemed to be the most effective and feasible BMP treatment for the Village 3 North & portion of 4 SPA project.

The Hunsaker WQTR summarizes the following City of Chula Vista's standard water quality mitigation measures to be implemented for the Village 3 North & portion of 4 SPA project.

- **Storm Water Pollution Prevention Plan:** Prior to issuance of each grading permit for Otay Ranch Village 10 or any land development permit, including clearing and grading, the project applicant shall submit a notice of intent and obtain coverage under the NPDES permit for construction activity from the SWRCB. Adherence to all conditions of the General Permit for Construction Activity is required. The applicant shall be required under the SWRCB General Construction Permit to develop a SWPPP and monitoring plan that shall be submitted to the City Engineer and the Director of Public Works. The SWPPP shall be incorporated into the grading and drainage plans and shall specify both construction and post construction structural and non-structural BMPs on site to reduce the amount of sediments and pollutants in construction and post-construction surface runoff before it is discharged into off-site storm water facilities. Section 7 of the City's Storm Water Manual outlines construction site BMP requirements. The SWPPP shall also address operation and maintenance of post-construction pollution prevention measures, including short-term and long-term funding sources and the party or parties that will be responsible for said measures. The grading plans shall note the condition requiring a SWPPP and monitoring plans.
- **Supplemental Water Quality Report:** Prior to issuance of each grading permit, the applicant shall submit a supplemental report to the Hunsaker WQTR that identifies

which on-site storm water management measures from the Master Water Quality Technical Report have been incorporated into the project to the satisfaction of the City Engineer.

- **Post-Construction/Permanent BMPs:** Prior to issuance of each grading permit, the City Engineer shall verify that parcel owners have incorporated and will implement post-construction BMPs in accordance with current regulations.
- **Limitation of Grading:** The project applicant shall comply with the Chula Vista Development Storm Water Manual limitation of grading requirements.
- **Hydromodification Criteria:** The project applicant shall comply, to the satisfaction of the City Engineer, with current hydromodification criteria or the hydrograph modification management plan, as applicable.

The combination of proposed construction and permanent BMP's will reduce, to the maximum extent practicable, the expected project pollutants and will not adversely impact the beneficial uses of the receiving waters. If new technology that increases treatment capacity at the time of construction is developed, it will also be utilized.

## **XII.6. Financing Drainage Facilities**

### **A. Onsite Facilities**

City policy requires that all master planned developments provide for the conveyance of storm waters throughout the project to City engineering standards. The project will be required to construct all onsite facilities that have not yet been identified through the processing of a subdivision.

In newly developing areas east of I-805, it is the City's policy that development projects assume the burden of funding all maintenance activities associated with drainage facilities. As such, the City will enter into an agreement with the project applicant whereby maintenance of drainage facilities will be assured by one of the following funding methods:

1. A property owner's association that would raise funds through fees paid by each property owner; or
2. A Community Facilities District (CFD) established over the entire project to raise funds through the creation of a special tax for drainage maintenance purposes.

### **B. Offsite Facilities**

Off-site drainage facilities that are necessary to support the proposed project are either constructed or are in the process of being designed and processed with the City of Chula Vista by other projects. There are no off-site drainage facilities required of the project. However, if other projects do not complete an off-site drainage facility that is necessary for this project the applicant may be required to complete the facility.

## **XII.7. Threshold Compliance**

- A. Prior to approval of the Tentative Map and/or Site Plan by the Design Review Committee, whichever occurs first, applicant shall demonstrate compliance with the City of Chula Vista Storm Water and Discharge Control Ordinance and the NPDES Municipal Permit (including the Final Model SUSMP for the San Diego Region). The Applicant shall obtain the approval of the City Engineer of a WQTR.
- B. The project shall comply with the recommended mitigation measures provided in the Hunsaker Drainage Study and the Hunsaker WQTR.
- C. The project shall be responsible for the conveyance of storm water flows in accordance with City Engineering Standards. The City Engineering Division will review all plans to ensure compliance with such standards.
- D. The project shall incorporate urban runoff planning in the Tentative Map.
- E. The project shall be required to comply with all current regulations related to water quality for the construction and post construction phases of the project. Both the future land development construction drawings and associated reports shall be required to include details, notes and discussions relative to the required or recommended BMPs.
- F. The project applicant will assure the maintenance of drainage facilities—by a property owner’s association that would raise funds through fees paid by each property owner and/or participation in a CFD established over the entire project to raise funds through the creation of a special tax for drainage maintenance purposes.
- G. Additional drainage analysis may be required at the tentative map phase of the project to demonstrate the adequacy of the proposed on-site storm drain system(s) and the existing storm drain connections.
- H. Future drainage reports shall be prepared by the Applicant, as required by the City of Chula Vista, for the final engineering phase(s) of the project.
- I. The project applicant shall comply with the Project EIR Water Quality & Hydrology mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The HYD designations correspond to the Project EIR numbered Hydrology measures:

**HYD-1:** *Erosion Control.* The developer shall monitor any erosion at the project’s outfalls at the Otay River and, prior to the last building permit for the project, obtain approval for and complete any reconstructive work necessary to eliminate any existing erosion and prevent future erosion from occurring, all to the satisfaction of the Development Services Director.

**HYD-2:** *Storm Water Pollution Prevention Plan.* Prior to issuance of each grading permit for each village or any land development permit, including clearing and grading, the project applicant shall submit a notice of intent and obtain coverage under the NPDES permit for construction activity from the SWRCB. Adherence to all conditions of the General Permit for Construction Activity is required. The applicant shall be required under the SWRCB General Construction Permit to develop a SWPPP and monitoring plan that shall be submitted to the City Engineer and the Director of Public Works. The SWPPP shall be incorporated into the grading and drainage plans and shall specify both construction and post-construction structural and non-structural BMPs on site to reduce the amount of sediments and pollutants in construction and post-construction surface

runoff before it is discharged into off-site storm water facilities. Section 7 of the City's Storm Water Manual outlines construction site BMP requirements. The SWPPP shall also address operation and maintenance of post-construction pollution prevention measures, including short-term and long-term funding sources and the party or parties that will be responsible for said measures. The grading plans shall note the condition requiring a SWPPP and monitoring plans.

**HYD-3:** *Supplemental Water Quality Report.* Prior to issuance of each grading permit, the applicant shall submit supplemental reports to the Otay Ranch Village 8 East Tentative Map Water Quality Technical Report, prepared by Hunsaker and Associates San Diego, Inc. (2014) that identifies which onsite storm water management measures from the Water Quality Technical Report have been incorporated into the project to the satisfaction of the City Engineer. If a storm water management option is chosen by the parcel owner that is not shown in the water quality technical report, a project-specific water quality technical report shall be prepared for the parcel, referencing the Otay Ranch Village 8 East Tentative Map Water Quality Technical Report for information relevant to regional design concepts (e.g., downstream conditions of concern) to the satisfaction of the City Engineer.

**HYD-4:** *Post-Construction/Permanent BMPs.* Prior to issuance of each grading permit, the City Engineer shall verify that parcel owners have incorporated and will implement post-construction BMPs in accordance with current regulations. In particular, applicants are required to comply with the requirements of Section 2c of the City of Chula Vista's Standard Urban Storm Water Management Plan (SUSMP), the Chula Vista Development Storm Water Manual, and the Otay Ranch Village 8 East Tentative Map Water Quality Technical Report, respectively, or any supplements thereto to the satisfaction of the City Engineer. Specifically, the applicant shall implement low impact development BMPs in the preparation of all site plans and, the applicant shall incorporate structural on-site design features into the project design to address site design and treatment control BMPs as well as requirements of the hydromodification management plan. The applicant shall monitor and mitigate any erosion in downstream locations that may occur as a result of on-site development.

**HYD-5:** *Limitation of Grading.* The project applicant shall comply with the Chula Vista Development Storm Water Manual limitation of grading requirements, which limit disturbed soil area to 100 acres, unless expansion of a disturbed area is specifically approved by the Director of Public Works. With any phasing resulting from this limitation, if required, the project applicant shall provide, to the satisfaction of the City Engineer, erosion and sediment control BMPs in areas that may not be completed, before grading of additional area begins.

**HYD-6:** *Hydromodification Criteria.* The project applicant shall comply, to the satisfaction of the City Engineer, with City Hydromodification Criteria or the hydrograph modification management plan, as applicable, addressed regionally at the SPA Plan level concurrent with grading and improvement plans.

**HYD-7:** *Scour Analysis.* Concurrent with all grading plan submittals, the applicant shall prepare a scour analysis for all structures within the 100-year flood hazard area. Additionally, all said structures shall be monitored until the last building permit for the project has been issued.



### **XIII. AIR QUALITY**

#### **XIII.1 Threshold Standard**

The GMOC shall be provided with an Annual Report which:

- A. Provides an overview and evaluation of local development projects approved during the prior year to determine to what extent they implemented measures designed to foster air quality improvement pursuant to relevant regional and local air quality improvement strategies.
- B. Identifies whether the city's development regulations, policies, and procedures relate to, and/are consistent with current, applicable federal, state, and regional air quality regulations and programs.
- C. Identifies non-development related activities being undertaken by the city toward compliance with relevant federal, state, and local regulations regarding air quality, and whether the city has achieved compliance.

The city shall provide a copy of said report to the Air Pollution Control District (APCD) for review and comment. The APCD shall report on overall regional and local air quality conditions as well as the status of regional air quality improvement implementation efforts under the Regional Air Quality Strategy and related federal and state programs. Further, the APCD report includes the effect of those efforts/programs on the city of Chula Vista and local planning and development activities.

#### **XIII.2 Service Analysis**

The City of Chula Vista has a Growth Management Element (GME) in its General Plan. One of the stated objectives of the GME is to be proactive in its planning to meet federal and state air quality standards. This objective is incorporated into the GME's action program.

To implement the GME, the City Council has adopted the Growth Management Program that requires Air Quality Improvement Plans (AQIP) for major development projects (50 residential units or commercial/industrial projects with equivalent air quality impacts). Title 19 (Sec. 19.09.0508) of the Chula Vista Municipal Code requires that a SPA submittal contain an AQIP. The AQIP shall include an assessment of how the project has been designed to reduce emissions as well as identify mitigation measures in accordance with the adopted AQIP Guidelines.

The Chula Vista City Council adopted the 2008 state Energy Code (Title 24) with an amendment requiring an increased energy efficiency standard. This amendment went into effect on February 26, 2010, as Section 15.26.030 of the Municipal Code. As required by this amendment, all building permits applied for and submitted on or after this date are subject to these increased energy efficiency standards. The increase in energy efficiency is a percentage above the new 2008 Energy Code and is dependent on climate zone and type of development proposed.

- New residential and nonresidential projects that fall within climate zone 7 must be at least 15% more energy efficient than the 2008 Energy Code.

- New low-rise residential projects (three-stories or less) that fall within climate zone 10 must be at least 20% more energy efficient than the 2008 Energy Code.

In Addition, per Section 15.12 of the City's Municipal Code, all new residential construction, remodels, additions, and alterations must provide a schedule of plumbing fixture fittings that will reduce the overall use of potable water by 20%.

The City of Chula Vista has developed a number of strategies and plans aimed at improving air quality. The City is a part of the Cities for Climate Protection Program, which is headed by the International Council of Local Environmental Initiatives (ICLEI). In November 2002, Chula Vista adopted the CO<sub>2</sub> Reduction Plan to lower the community's major greenhouse gas emissions, strengthen the local economy, and improve the global environment. The CO<sub>2</sub> Reduction Plan focuses on reducing fossil fuel consumption and decreasing reliance on power generated by fossil fuels, which would have a corollary effect in the reduction of air pollutant emissions into the atmosphere.

### **XIII.2 Adequacy Analysis**

The Air Quality and Global Climate Change Technical Report for the Otay Ranch University Villages Project, dated May 2014 , by *Dudek*, (Dudek AQIP) evaluated the potential for adverse impacts to the ambient air quality due to construction and operational emissions resulting from the Project. The Dudek AQIP indicates that construction would result in a temporary addition of pollutants to the local air shed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials.

Dudek estimated emissions from the project construction phase through the use of emission factors from the URBEMIS 2007, Version 9.2.4, land use and air emissions model (Jones & Stokes 2007). Construction is anticipated to begin with Village 3 North and continue over a 15-16 year period. Project construction would end with buildout of Village 10, which is anticipated to occur in August 2029. A detailed description of construction subphases (mass grading, fine grading, trenching, paving, building construction, and architectural coatings), as well as other assumptions made for the purposes of modeling, is included in the Dudek AQIP (Appendix A). Further, the Dudek AQIP provides a detailed analysis of construction emission impacts.

The Village 3 North SPA Plan project is subject to SDAPCD Rule 55 – Fugitive Dust Control. This requires that the project take steps to restrict visible emissions of fugitive dust beyond the property line. Compliance with Rule 55 would limit any fugitive dust (PM10 and PM2.5) that may be generated during grading and construction activities. The Dudek AQIP determined that the active construction sites should be watered at least two times daily, resulting in an approximately 55% reduction of particulate matter.

The project is also subject to SDAPCD Rule 67. Architectural Coatings which requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

Because the project phasing overlaps with other villages, construction emissions for Village 3 North and portion of Village 4, Village 8 East and Village 10, can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts. Fugitive dust (PM10 and PM2.5) emissions would primarily result from grading and site preparation activities. NOx and CO emissions would primarily result from the use of construction equipment and motor vehicles.

The Dudek AQIP concludes that construction emissions would not exceed the City’s significance thresholds for CO and SOx. However, the VOC, NOx, PM10, and PM2.5 emissions associated with project construction would exceed the City of Chula Vista’s emission threshold. Mitigation measures are provided that would reduce construction-related emissions. These measures are included in the PFFP for Threshold Compliance.

Table L.1, Estimated Daily Maximum Operational Emissions, presents the maximum daily emissions associated with the operation of the proposed project after all phases of construction have been completed. The values shown are the maximum summer and winter daily emissions results from the Dudek AQIP.

<b>Table L.1</b>						
<b>Estimated Daily Maximum Operational Emissions – 2030 (pounds/day)</b>						
<b>Villages 3 North/Portion of 4, 8 East, and 10</b>						
<b>Proposed Project Emissions</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>Summer</b>						
Motor Vehicles	248.06	242.40	2,753.76	8.32	1,349.61	261.83
Area Sources	396.82	87.52	168.02	0.01	0.52	0.52
Total	644.88	329.92	2,921.78	8.33	1,350.13	262.35
<i>City of Chula Vista Threshold</i>	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
<b>Winter</b>						
Motor Vehicles	266.89	291.97	2,576.56	6.92	1,349.61	261.83
Area Sources	377.07	131.50	56.44	0.29	3.84	3.80
Total	643.96	423.47	2,633	7.21	1,353.45	265.63
<i>City of Chula Vista Threshold</i>	55	55	550	150	150	55
<b>Threshold Exceeded?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>
Source: URBEMIS 2007 Version 9.2.4. See Dudek AQIP Appendix A for complete results.						
Note: Construction emissions shown include emissions from construction of all Villages analyzed under the proposed project, including Village 3 and a Portion of Village 4, Village 8 East, and Village 10.						
“Summer” emissions are representative of the conditions that may occur during the ozone season (May 1 to October 31) and “Winter” emissions are representative of the conditions that may occur during the balance of the year (November 1 to April 30)						

*Source: Dudek AQIP*

As shown above, daily operational emissions would not exceed the City’s significance thresholds for SOx. However, the VOC, NOx, CO, SOx, PM10, and PM2.5 emissions associated with operation of the project would exceed the City of Chula Vista’s significance thresholds. Project design features would help to reduce operational emissions; however, significant reductions in VOC, NOx, CO, PM10, and PM2.5 emissions would be required to reduce emissions of these pollutants to less than significant, and mitigation measures are not available to achieve these reductions. Therefore, even with incorporation of these design features, criteria pollutant emissions are anticipated to be above the thresholds for VOC, NOx, CO, SOx, PM10, and PM2.5. This impact is therefore considered significant and unavoidable.

The Village 3 North AQIP also evaluated the potential effect on global climate change, and

emissions of greenhouse gases were estimated based on the use of construction equipment and vehicle trips associated with construction activities, as well as operational emissions once construction phases are complete. The estimated GHG emissions associated with vehicular traffic, area sources, electrical generation, water supply, and solid waste generation are shown below in Table L.2. Because the project phasing overlaps with other villages, Table L.2 includes emissions for Village 3 North and portion of Village 4, Village 8 East and Village 10. The estimated emissions of CO<sub>2</sub>E would be 203,688 metric tons per year without the GHG reduction measures ("business as usual"), and 144,520 metric tons per year with the GHG reduction measures. As indicated in L.2, the GHG reduction measures would reduce GHG emissions by approximately 29%.

The City of Chula Vista has developed a number of strategies and plans aimed at improving air quality while also addressing global climate change. In November 2002, Chula Vista adopted the Carbon Dioxide Reduction Plan. Implementation of GHG reduction measures by the proposed project would reduce GHG emissions by 29%. The proposed project would therefore exceed the target of 20% below business as usual that has been established for the purposes of assessing operational GHG emissions of projects in the City of Chula Vista, and this reduction would be consistent with the goals of AB 32. Furthermore, the project would be consistent with Section 15.26.030 of the City's Municipal Code by employing energy efficient measures beyond that required by the Energy Code, resulting in a 15% reduction in emissions generated by energy use.

<b>Table L.2</b>			
<b>Estimated Operational GHG Emissions (metric tons/year)</b>			
<b>Villages 3 North/Portion of 4, 8 East, and 10</b>			
<b>Source</b>	<b>CO<sub>2</sub>E Emissions</b>	<b>CO<sub>2</sub>E Emissions w/ GHG Reduction Measures</b>	<b>Percent Reduction</b>
Motor Vehicles	138,188	93,968	32%
Area Sources			
Natural Gas Combustion	18,213	12,749	30%
Hearth Combustion	26	26	0%
Landscaping	39	39	0%
Electrical Generation	22,031	15,422	30%
Water Supply	9,844	6,970	29%
Solid Waste	14,043	14,043	0%
Amortized Annual Const. Emissions	1,304	1,304	0%
<b>Total</b>	<b>203,688</b>	<b>144,520</b>	<b>29.0%</b>
Note: Construction emissions shown include emissions from construction of the University Villages project including Village 3 and a Portion of Village 4, Village 8 East, and Village 10			

*Source: Dudek AQIP*

### **XIII.3 Threshold Compliance**

The project applicant shall comply with the Project EIR Air Quality mitigation measures. A full discussion of these mitigation measures can be found in the Project EIR. The AQ designations correspond to the Project EIR numbered Air Quality measures:

- A. **AQ-1:** Prior to approval of any grading permits, the project applicant or its designee shall place the following requirements on all grading plans, and shall be implemented during grading of each phase of the project to minimize NOx emissions:

- Minimize simultaneous operation of multiple construction equipment units. During construction, vehicles in loading and unloading queues shall turn their engines off when not in use to reduce vehicle emissions;
  - All construction equipment shall be outfitted with best available control technology (BACT) devices certified by CARB. A copy of each unit's BACT documentation shall be provided at the time of mobilization of each applicable unit of equipment;
  - All construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications;
  - All diesel-fueled on-road construction vehicles shall meet the emission standards applicable to the most current year to the greatest extent possible. To achieve this standard, new vehicles shall be used, or older vehicles shall use post-combustion controls that reduce pollutant emissions to the greatest extent feasible;
  - The effectiveness of the latest diesel emission controls is highly dependent on the sulfur content of the fuel. Therefore, diesel fuel used by on- and off-road construction equipment shall be low sulfur (less than 15 ppm) or other alternative, low-polluting diesel fuel formulation.
  - The use of electrical construction equipment shall be employed where feasible;
  - The use of catalytic reduction for gasoline-powered equipment shall be employed where feasible;
  - The use of injection timing retard for diesel-powered equipment shall be employed where feasible.
- B. AQ-2:** Prior to approval of any grading permits, and during project construction, the project applicant or its designee shall require implementation of the City's Standard Construction Best Management Practices (BMPs), including:
- Water the grading areas at least twice daily to minimize fugitive dust;
  - Stabilize grading areas as quickly as possible to minimize fugitive dust;
  - Apply chemical stabilizer or pave the last 100 feet of internal travel path within the construction site prior to public road entry;
  - Install wheel washers adjacent to a paved apron prior to vehicle entry on public roads;
  - Remove any visible track-out into traveled public streets within 30 minutes of occurrence;
  - Wet wash the construction access point at the end of the workday if any vehicle travel on unpaved surfaces has occurred;
  - Provide sufficient perimeter erosion control to prevent washout of silty material onto public roads;
  - Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling;
  - Suspend all soil disturbance and travel on unpaved surfaces if winds exceed 25 miles per hour (mph);
  - Cover/water on-site stockpiles of excavated material; and
  - Enforce a 20 mph speed limit on unpaved surfaces.
  - Pave permanent roads as quickly as possible to minimize dust;
  - During construction, site grading activities within 500 feet of a school in operation shall be discontinued or all exposed surfaces shall be discontinued or all exposed surfaces shall be watered to minimize dust transport off site to the maximum degree feasible, when the wind velocity is greater than 15mph in the direction of the school;

- During blasting, utilize control measures to minimize fugitive dust. Control measures may include, but are not limited to, blast enclosures, vacuum blasters, drapes, water curtains or wet blasting.
- C. **AQ-3** Prior to approval of the building permit for any uses that are regulated for TACs by the SDAPCD, the project applicant shall demonstrate to the satisfaction of the Development Services Director (or their designee) that the use complies with established criteria (such as those established by SDAPCD Rule 1200 and CARB). Also, gas stations shall not be located within 50 feet of a sensitive receptor, in accordance with CARB's siting recommendations.

## **XIV. CIVIC CENTER:**

### **XIV.1 City Threshold Standards:**

There are no adopted Threshold Standards for the Civic Center. Funds for the most recent renovation of the Civic Center are tied to the PFDIF fees in effect at the time building permits are issued.

### **XIV.2 Existing Conditions:**

The Chula Vista Civic Center Complex, the construction of the new Public Services Building and the gutting and remodeling of the old Police Station for additional offices was completed in 2008. This complex was designed to accommodate the projected growth of the City of Chula Vista.

### **XIV.3 Adequacy Analysis:**

The need for the Civic Center cannot be easily related to population figures or acres of commercial and industrial land which will be developed in the future. The 2008 expansion of the Civic Center Complex included space planning, design, and construction to keep pace with demand for future work space. The Civic Center Complex includes a state of the art Council Chambers, a conversion of the old Police Station to additional office space and re-building of the Public Services Building.

### **XIV.4 Financing Civic Center Facilities:**

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 7, 2006 by adoption of Ordinance 3050. The PFDIF amount is subject to change as it is amended from time to time. The Civic Center PFDIF Fee for Single Family Development is \$2,756/unit. The Civic Center PFDIF Fee for Multi-Family Development is \$2,610/unit. Only residential development impact fees apply to the project. The PFDIF amount is subject to change as it is amended from time to time. At the current fee rate, the project Civic Center Fee obligation at buildout is approximately \$4,486,867 (see Table M.1).

**Table M.1  
Village 3 North & portion of 4 SPA  
Public Facilities Fees For Civic Center**

Phase	Dwelling Units		Com'l Acres	Ind. Acres	Civic Center Fee				
	SF	MF			Single Family	Multi-Family	Com'l <sup>1</sup>	Ind.	Total Fee
					\$2,756/DU	\$2,610/DU	\$8,792/Ac.	\$2,779/Ac	
Red	481	0	0	0	\$1,325,636	\$0	\$0	\$0	\$1,325,636
Blue	477	44	0	0	\$1,314,612	\$114,840	\$0	\$0	\$1,429,452
Yellow	0	0	0	28.6	\$0	\$0	\$0	\$79,479	\$79,479
Green	0	595	11.3	0	\$0	\$1,552,950	\$99,350	\$0	\$1,652,300
Purple	0	0	0	0	\$0	\$0	\$0	\$0	\$0
Subtotal	958	639	11.3	28.6	\$2,640,248	\$1,667,790	\$99,350	\$79,479	\$4,486,867
Total	1597		11.3	28.6	\$2,640,248	\$1,667,790	\$99,350	\$79,479	\$4,486,867
<b>Footnote:</b>									
<sup>1</sup> Office uses are treated as Commercial Uses for PDIF.									

Table M.1 is only an estimate. Actual fees at the time building permits are requested may be different. PDIF Fees are subject to change depending upon City Council actions and or Developer actions that change residential densities, industrial acreage or commercial acreages.

They are to be paid prior to the issuance of building permits at the rate in effect at the time payment is made.

## **XV. CORPORATION YARD**

### **XV.1. Threshold Standards:**

There are no adopted Threshold Standards for the Corporation Yard.

### **XV.2. Existing Conditions:**

The 2.5 acre John Lippitt Public Works Center located at 1800 Maxwell Road was previously an SDG&E equipment and repair facility. The city renovated and added new improvements for the maintenance and repair of city owned equipment. The administration building was renovated and updated to provide offices for City of Chula Vista Public Works Department. Also, the facilities consist of shop buildings and the maintenance building, including parking for employees, city vehicles and equipment. In addition, there is a Bus Wash/Fuel Island/CNG and associated equipment on-site.

### **XV.3 Adequacy Analysis:**

The need for a Corporate Yard cannot be easily related to population figures or acres of commercial and industrial land which will be developed in the future. The growth in population, increase in street miles and the expansion of developed areas in Chula Vista, requires more equipment for maintenance as well as more space for storage and the administration of increased numbers of employees. The need for a larger Corporation Yard has been specifically related to new development.

### **XV.4. Financing Corporate Yard Facilities:**

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 7, 2006 by adoption of Ordinance 3050. The PFDIF amount is subject to change as it is amended from time to time. The Corporate Yard PFDIF Fee for Single Family Development is \$450/unit and for Multi-Family Development it is \$360/unit. At the current fee rate, the Village 3 North & Portion of 4 SPA Corporate Yard Fee obligation at build-out is \$850,261 (see Table N.1).

**Table N.1  
Village 3 North & portion of 4 SPA  
Public Facilities Fees For Corporate Yard**

Phase	Dwelling Units		Com'l Acres	Ind. Acres	Civic Center Fee				Total Fee
	SF	MF			Single Family \$450/DU	Multi-Family \$360/DU	Com'l <sup>1</sup> \$7,635/Ac.	Ind. \$3,596/Ac	
Red	481	0	0	0	\$216,450	\$0	\$0	\$0	\$216,450
Blue	477	44	0	0	\$214,650	\$15,840	\$0	\$0	\$230,490
Yellow	0	0	0	28.6	\$0	\$0	\$0	\$102,846	\$102,846
Green	0	595	11.3	0	\$0	\$214,200	\$86,276	\$0	\$300,476
Purple	0	0	0	0	\$0	\$0	\$0	\$0	\$0
Subtotal	958	639	11.3	28.6	\$431,100	\$230,040	\$86,276	\$102,846	\$850,261
Total	1597		11.3	28.6	\$431,100	\$230,040	\$86,276	\$102,846	\$850,261

**Footnote:**

<sup>1</sup> Office uses are treated as Commercial Uses for PDIF.

Table M.1 is only an estimate. Actual fees may be different. PDIF Fees are subject to change depending upon City Council actions and or Developer actions that change residential densities. Actual fees may be different.

They are to be paid prior to the issuance of building permits at the rate in effect at the time payment is made.

**XVI. OTHER PUBLIC FACILITIES**

**XVI.1. Threshold Standard:**

There are no adopted Threshold Standards for other facilities which are part of the Public Facilities Development Impact Fee (PFDIF) Program. The information regarding these capital items is being provided in this section of the PFFP to aid the city in calculating the required PFDIF.

**XVI.2. Existing Conditions:**

The City collects funds from building permit issuance in the Eastern Territories for deposit to the accounts associated with Administration costs only and not the other aforementioned public facilities. Funds are not currently collected for Records Management, Telecommunications, Computer Systems and GIS.

**XVI.3. Financing Other Public Facilities:**

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 7, 2006 by adoption of Ordinance 3050. The PFDIF amount is subject to change as it is amended from time to time. The Administration PFDIF Fee for Single-Family Development is \$601/unit and Multi-Family Development is \$568/unit. At the current fee rate, the Village 3 North & portion of 4 SPA Other Public Facilities Fee obligation at build-out is approximately \$977,704 (see Table O.1). Table O.1 is an estimate only.

Phase	Dwelling Units		Com'l Acres	Industrial Acres	Other Public Facilities Fees				Total Fee
	SF	MF			Single Family \$601/DU	Multi-Family \$568/DU	Com'l <sup>1</sup> \$1,917/Ac.	Ind. \$606/Ac	
Red	481	0	0	0	\$289,081	\$0	\$0	\$0	\$289,081
Blue	477	44	0	0	\$286,677	\$24,992	\$0	\$0	\$311,669
Yellow	0	0	0	28.6	\$0	\$0	\$0	\$17,332	\$17,332
Green	0	595	11.3	0	\$0	\$337,960	\$21,662	\$0	\$359,622
Purple	0	0	0	0	\$0	\$0	\$0	\$0	\$0
Subtotal	958	639	11.3	28.6	\$575,758	\$362,952	\$21,662	\$17,332	\$977,704
<b>Total</b>	<b>1597</b>		<b>11.3</b>	<b>28.6</b>	<b>\$575,758</b>	<b>\$362,952</b>	<b>\$21,662</b>	<b>\$17,332</b>	<b>\$977,704</b>
<b>Footnote:</b>									
<sup>1</sup> Office uses are treated as Commercial Uses for PDIF.									

Table O.1 is an estimate only since PDIF Fees are subject to change as it is amended from time to time. Changes in the number of dwelling units, Industrial Acreage or Commercial Acreage may affect the estimated fee.

The PFDIF shall be paid prior to the issuance of building permits at the rate in effect at the time payment is made.

## **XVII. FISCAL ANALYSIS**

### **XVII.1. Threshold Standard**

- A. The GMOC shall be provided with an annual fiscal impact report, which provides an evaluation of the impacts of growth on the City, both in terms of operations and capital improvements. This report should evaluate actual growth over the previous 12-month period, as well as projected growth over the next 12-18 month period, and 3-5 year period.
- B. The GMOC shall be provided with an annual “development impact fee” which provides an analysis of development impact fees collected and expended over the previous 12-month period.

### **XVII.2. Facility Master Plan**

There is no existing Master Plan for fiscal issues. However, an economic base study and a long range fiscal impact study was prepared by P&D Technologies as part of the Chula Vista General Plan.

### **XVII.3. Project Processing Requirements**

The SPA Plan and the PFFP are required by the Growth Management Program to prepare a phased fiscal/economic report dealing with revenue vs expenditures including maintenance and operations.

### **XVII.4 Project Description**

SSBT LCRE V, LLC has prepared and submitted the Village 3 North & portion of 4 SPA Plan, which will eliminate the Village 3 North area from the boundary of the approved Otay Ranch Village 2, 3 and a portion of 4 SPA Plan. The proposed SPA Plan also includes a portion of Village 4. The City of Chula Vista retained HR&A Advisors (HR&A), an experienced fiscal consultant, to estimate the fiscal impacts of the proposed amendment. The amendment proposes approximately 1,597 single-family, multi-family & mixed use residential units, 33.4 acres of industrial uses, commercial uses, community purpose facilities (CPF), 25.7 acres of parkland (17.8 acre Community Park in Village 4), nearly 200 acres of permanent open space and an elementary school.

### **XVII.5 Fiscal Analysis of Project**

This section of the PFFP is based upon the *Draft Fiscal Impact Analysis of University Village 3 North & a portion of Village 4 to the City of Chula Vista, dated June 9, 2014, by HR&A Advisors*. This FIA is referred to as the HR&A FIA throughout this document. The HR&A FIA evaluates the net fiscal impacts to the City of Chula Vista by the development of the Village 3 North & portion of 4 SPA Plan. Net fiscal impacts represent total fiscal revenues to the City of Chula Vista less fiscal costs.

The City of Chula Vista’s SPA Fiscal Impact Framework was used by HR&A to estimate the net fiscal impacts. As prescribed in the SPA Fiscal Impact Framework, HR&A used historical City of Chula Vista revenue and expenditure factors from the SPA Fiscal Impact

Framework to estimate fiscal revenues and expenditures expected to grow proportionally with new development. Special analysis models are used to estimate revenues, such as property tax revenues, motor vehicle license fee (MVLFF) in lieu revenues, and sales taxes that may not grow proportionately with new development.

The detailed methodology of the SPA Fiscal Impact Framework is described in the memorandum “*SPA Fiscal Analysis –Fiscal Model Methodology Including the Development of Fiscal Factors in the Analysis of SPA Proposals*”, dated February 2008.

#### **XVII.6. Fiscal Impacts**

The HR&A FIA projects all the fiscal revenues and fiscal expenditures to the City of Chula Vista as outlined in the City of Chula Vista’s SPA Fiscal Impact Framework. The fiscal revenues are compared to the fiscal expenditures associated with the Village 3 North & portion of 4 SPA Plan to estimate the net fiscal impact of the project. These are summarized in Table P.1. The figures in this table have been adjusted to reflect 2014 dollars. The HR&A FIA is attached as Appendix A and presents the detailed analysis of the project in narrative and tabular form.

This fiscal impact analysis projects all fiscal revenues and fiscal expenditures to the City of Chula Vista as outlined in the City of Chula Vista’s SPA Fiscal Impact Framework. Annual fiscal revenues are compared to annual fiscal expenditures associated with the Village 3 North & portion of 4 SPA Plan land use plan to estimate the net fiscal impact.

Table P.1 indicates that Village 3 North is expected to generate a positive annual net fiscal impact of \$401,000 in 2030 (Year 17) to the City of Chula Vista. Village 3 North is anticipated to generate annual fiscal revenues of approximately \$2.5 million in 2030 (Year 17). Property taxes are the greatest source of revenues, followed by MVLFF In-Lieu revenues. In addition, Village 3 is projected to generate \$2.1 million in annual fiscal costs to the City of Chula Vista in 2030 (Year 17). Public safety costs—police and fire—make up 64 percent of annual fiscal costs.

The development generates annual net fiscal costs between 2014 and 2016 (Year 1 through Year 3), primarily due to the lag in property tax receipts. During this period, the project will generate a net fiscal cost to the City of Chula Vista totaling -\$164,000. Village 3 generates a net fiscal revenue starting in 2017 (Year 4). There is a one-time surge in annual fiscal impacts in 2019 (Year 6) due to property transfer tax from the last year of residential absorption. Thereafter, net fiscal revenues gradually increase as industrial acres and commercial acres are absorbed between 2018 and 2028 (Year 5 and Year 15).

**Table P.1  
Village 3 North & portion of 4 SPA Plan Fiscal Impact Summary**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
<i>2014 Dollar Inflation Factor</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>	<i>1.069</i>
Total Expenditures	\$231,131	\$744,697	\$1,258,264	\$1,600,111	\$1,874,791	\$1,901,383	\$1,956,767	\$1,965,171	\$1,973,575	\$1,981,979
Total Revenues	\$197,631	\$656,079	\$1,216,811	\$1,661,425	\$1,992,622	\$2,141,631	\$2,123,495	\$2,153,724	\$2,176,134	\$2,204,209
<b>Net Fiscal Impacts (2014 Dollars)</b>	<b>(\$33,500)</b>	<b>(\$88,618)</b>	<b>(\$41,453)</b>	<b>\$61,313</b>	<b>\$117,831</b>	<b>\$240,248</b>	<b>\$166,728</b>	<b>\$188,553</b>	<b>\$202,559</b>	<b>\$222,229</b>

	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
	<b>Year 11</b>	<b>Year 12</b>	<b>Year 13</b>	<b>Year 14</b>	<b>Year 15</b>	<b>Year 16</b>	<b>Year 17</b>
<i>2014 Dollar Inflation Factor</i>	<i>1.069</i>						
Total Expenditures	\$1,990,384	\$2,016,976	\$2,043,568	\$2,070,160	\$2,080,805	\$2,080,805	\$2,080,805
Total Revenues	\$2,234,179	\$2,275,501	\$2,331,040	\$2,384,592	\$2,432,497	\$2,460,484	\$2,481,552
<b>Net Fiscal Impacts (2014 Dollars)</b>	<b>\$243,795</b>	<b>\$258,526</b>	<b>\$287,472</b>	<b>\$314,432</b>	<b>\$351,692</b>	<b>\$379,679</b>	<b>\$400,747</b>

*Source: HR&A*

## **XVIII. PUBLIC FACILITY FINANCE**

### **XVIII.1. Overview**

All development within the City of Chula Vista must be in compliance with the City's Growth Management Program. Appropriate public facility financing mechanisms are required and approved by the City to fund the acquisition, construction and maintenance of public facilities. New facilities will be required to support the planned development of the project.

Public facilities are generally provided or financed in one or more of the following ways: Subdivision Exaction, Development Impact Fee, and Debt Financing. It is anticipated that two methods will be utilized for the Otay Ranch Village 3 North & a portion of Village 4 SPA project to construct and finance public facilities.

### **XVIII.2. Subdivision Exactions**

Neighborhood level public improvements will be developed simultaneously with related residential and non-residential subdivisions. Through the Subdivision Map Act, it is the responsibility of the developer to provide for all local street, utility and recreation improvements. The use of subdivision conditions and exactions, where appropriate, will insure that the construction of neighborhood facilities is timed with actual development.

The imposition of subdivision conditions and exactions does not preclude the use of other public facilities financing mechanisms to finance the public improvement, when appropriate.

### **XVIII.3. Development Impact Fee Programs**

Development Impact Fees are imposed by the City of Chula Vista and the Otay Municipal Water District, consistent with State law, to contribute to the financing of capital facilities improvements. Public infrastructure is constructed by the public agency or Developer with a reimbursement or credit against specific fees. The Otay Ranch Village 3 North & a portion of Village 4SPA Project is subject to fees established to help defray costs of facilities that will benefit the project. These fees include but may not be limited to:

- A. Transportation Development Impact Fee (TDIF): Established to provide financing for circulation element road projects of regional significance.
- B. Public Facilities Development Impact Fee (PFDIF): Established to collect funds for civic center facilities, police, corporation yard, libraries, fire suppression system, recreation and administration.
- C. Traffic Signal Fees: To pay for traffic signals associated with circulation element streets.
- D. Park Acquisition and Development Fee — PAD Fee established to pay for the acquisition and development of park facilities.
- E. Otay Water District (OWD) Fees: The district may require annexation to an existing improvement district or creation of some other finance mechanism that may result in specific fees being modified.
- F. Poggi Canyon and Wolf Canyon/Salt Creek Sewer Development Impact Fee: To pay for sewer facilities within the Poggi Canyon and Wolf Canyon/Salt Creek basins.

#### **XVIII.4. Debt Finance Programs**

The City of Chula Vista has historically used assessment districts to finance a number of street improvements, as well as sewer and drainage facilities. The OWD has used such improvement districts for water system improvements. Both school districts have implemented Mello-Roos Community Facilities Districts to finance school facilities.

##### **A. Assessment Districts**

Special assessment districts may be proposed for acquiring, constructing and/or maintaining certain public improvements under the Municipal Improvement Act of 1913 and the Improvement Bond Act of 1915. The City has suspended the use of the Lighting and Landscape Act of 1972 for new open space district formation due to the passage of Proposition 218. The administration of the special assessment district is the responsibility of the public agency.

##### **B. Community Facilities District (CFD)**

On January 13, 1998, the City Council adopted the "City of Chula Vista statement of goals and policies regarding the establishment of Community Facilities Districts" (CFD's). The approval of this document ratified the use of CFD's as a public financing mechanism for:

- The construction and/or acquisition of public infrastructure, and
- The financing of authorized public services, including services provided by open space districts.

On April 28, 1998, the City Council enacted the "Chula Vista Community Facilities District Ordinance." This ordinance adopted the Mello-Roos Act with modifications to additionally include the following:

- Incorporate all maintenance activities authorized by the "Landscaping & Lighting Act of 1972" (1972 Act) and
- Include maintenance activities not listed in the "Mello-Roos Act" or the "1972 Act."

Special assessment financing may be appropriate when the value or benefit of the public facility can be assigned to specific properties. Assessments are levied in specific amounts against each individual property on the basis of relative benefit. Special assessments may be used for both publicly dedicated on-site and off-site improvements.

##### **C. Mello-Roos Community Facilities Act of 1982**

The Mello-Roos Community Facilities Act of 1982 authorizes formation of community facilities districts, which impose special taxes to provide the financing of certain public facilities or services. Facilities that can be provided under the Mello-Roos Act include the purchase, construction, expansion, or rehabilitation of the following:

- Local park, recreation, or parkway facilities;
- Elementary and secondary school sites and structures;
- Libraries;
- Any other governmental facilities that legislative bodies are authorized to construct, own or operate including certain improvements to private property.

In addition, the City has enacted an ordinance that adopted the Mello-Roos Act with modifications to accomplish the maintenance of facilities.

## **XVIII.5. Other Methods Used to Finance Facilities**

### **A. General Fund**

The City of Chula Vista's general fund pays for many public services throughout the City. Those facilities and services identified as being funded by general fund sources represent those that will benefit not only the residents of the proposed project, but also Chula Vista residents throughout the City. In most cases, other financing mechanisms are available to initially construct or provide the facility or service, and then general fund monies would only be expected to fund the maintenance costs once the facility is accepted by the City.

### **B. State and Federal Funding**

These funds are rarely available to fund an entire project. Federal and State financial and technical assistance programs have been available to public agencies, in particular the public school districts.

### **C. Dedications**

Dedication of sites by developers for public capital facilities is a common financing tool used by many cities.

### **D. Homeowners Associations**

One or more Community Homeowner Associations may be established by the developer to manage, operate and maintain private facilities and common areas within the project.

### **E. Developer Reimbursement Agreements**

Certain facilities that are off-site of project and/or provide regional benefits may be constructed in conjunction with the development of the project. In such instances, developer reimbursement agreements will be executed to provide for a future payback to the developer for the additional cost of these facilities. Future developments are required to pay back their fair share of the costs for the shared facility when development occurs.

### **F. Special Agreements/Development Agreement**

This category includes special development programs for financing special arrangements between the City and the developer such as credits against fees, waiver of fees, or charges for the construction of specific facilities.

A development agreement can play an essential role in the implementation of the Public Facilities Financing Plan. The Public Facilities Financing Plan clearly details all public facility responsibilities and assures that the construction of all necessary public improvements will be appropriately phased with actual development, while the development agreement identifies the obligations and requirements of both parties.

### **G. Park Acquisition and Development Fees**

Fee established to pay land and improvements by new development.

## **XVIII.6. Public Facility Finance Policies**

The following finance policies were included and approved with the Growth Management Program to maintain a financial management system that will be implemented consistently when considering future development applications. These policies will enable the City to

effectively manage its fiscal resources in response to the demands placed on the City by future growth.

- A. Prior to receiving final approval, developers shall demonstrate and guarantee that compliance is maintained with the City's adopted Threshold Standards.
- B. The Capital Improvement Program Budget will be consistent with the goals and objectives of the Growth Management Program. The Capital Improvement Program Budget establishes the timing for funding of all fee related public improvements.
- C. The priority and timing of public facility improvements identified in the various City fee programs shall be made at the sole discretion of the City Council.
- D. Priority for funding from the City's various fee programs shall be given to those projects which facilitate the logical extension or provision of public facilities as defined in the Growth Management Program.
- E. Fee credits, reimbursement agreements, developer agreements or public financing mechanisms shall be considered only when it is in the public interest to use them or these financing methods are needed to rectify an existing facility threshold deficiency. Such action shall not induce growth by prematurely extending or upgrading public facilities.
- F. All fee credit arrangements or reimbursement agreements will be made based upon the City's plans for the timing and funding of public facilities contained in the Capital Improvement Program Budget.
- G. Public facility improvements made ahead of the City's plans to construct the facilities will result in the need for additional operating and maintenance funds. Therefore all such costs associated with the facility construction shall become the responsibility of the developer until such time as the City had previously planned the facility improvement to be made.

#### **XVIII.7. Cumulative Debt**

The City of Chula Vista has an established policy limiting the maximum debt to be placed on a residential dwelling unit to an additional one percent above the property tax. This policy was restated in the adopted Growth Management Program.

Like many other cities, Chula Vista has long understood that it is not the only agency that can utilize public finance mechanisms and, therefore, cannot always guarantee that the total debt will remain at or below a maximum of 2 percent. As a result, the City makes an effort to coordinate its debt finance programs with the other special districts (schools and water), which provide service to the residents of Chula Vista to ensure that the cumulative debt does not become excessive. Coordination is also necessary to guarantee all public facilities needed to support a development can be financed and constructed as needed.

## **XVIII.8. Lifecycle Cost**

Section 19.09.060 Analysis subsection F (2) of the Growth Management Ordinance requires the following:

"...The inventory shall include Life Cycle Cost ("LCC") projections for each element in 19.09.060(E)...as they pertain to City fiscal responsibility. The LCC projections shall be for estimated life cycle for each element analyzed. The model used shall be able to identify and estimate initial and recurring life cycle costs for the elements..."

### **Background**

Life cycle costing (LCC) is a method of calculating the total cost of asset ownership over the life span of the asset. Initial costs and all subsequent expected costs of significance are included in the life cycle cost analysis as well as disposal value and any other quantifiable benefits to be derived as a result of owning the asset. Operating and maintenance costs over the life of an asset often times far exceed initial costs and must be factored into the decision process.

Life cycle cost analysis should not be used in each and every purchase of an asset. The process itself carries a cost and therefore can add to the cost of the asset. Life Cycle Cost analysis can be justified only in those cases in which the cost of the analysis can be more than offset by the savings derived through the purchase of the asset.

Four major factors which may influence the economic feasibility of applying LCC analysis are:

- A. Energy Intensiveness — LCC should be considered when the anticipated energy costs of the purchase are expected to be large throughout its life.
- B. Life Expectancy — For assets with long lives (i.e., greater than five years), costs other than purchase price take on added importance. For assets with short lives, the initial costs become a more important factor.
- C. Efficiency — The efficiency of operation and maintenance can have significant impact on overall costs. LCC is beneficial when savings can be achieved through reduction of maintenance costs.
- D. Investment Cost — As a general rule, the larger the investment the more important LCC analysis becomes.

The four major factors listed above are not, however, necessary ingredients for life cycle cost analysis. A quick test to determine whether life cycle costing would apply to a purchase is to ask whether there are any post-purchase costs associated with it. Life cycle costs are a combination of initial and post-purchase costs.

### **Applications for LCC Analysis**

The City of Chula Vista utilizes the concepts of life cycle cost analysis in determining the most cost effective purchase of capital equipment as well as in the determination of replacement costs for a variety of rolling stock. City staff uses LCC techniques in the preparation of the City's Five Year Capital Improvement Budget (CIP) as well as in the Capital Outlay sections of the annual Operating Budget.

City Codes and Regulations provide the standards and design specifications that are required for infrastructure. Developers and contractors are required to meet city standards and design regulations. These standards and specifications have been developed over time to achieve the maximum life cycle of infrastructure that will be owned and maintained by the city. Prior to approval of new infrastructure, City Staff thoroughly reviews all plans and specifications to insure the maximum life cycle.

The initial construction of roads, traffic signals, sewers, drainage, lighting, etc., usually accounts for the bulk of the costs associated with a project. The initial construction activities consist of preliminary engineering, construction engineering, traffic control, etc. Subsequent to initial construction, the City of Chula Vista is responsible for maintenance, rehabilitation and eventual reconstruction/replacement over a projected 50 year life expectancy.

All project public facilities for the Otay Ranch Village 3 North & a portion of Village 4 Comprehensive SPA Plan are subject to the City's life cycle cost analysis before construction. The City uses LCC analysis prior to or concurrent with the design of public facilities required by new development. Such requirement assists in the determination of the most cost effective selection of public facilities.

## **APPENDIX**

### **A. Fiscal Impact Analysis Report**



# **Fiscal Impact Analysis of University Village 3 North and a Portion of Village 4 to the City of Chula Vista**

Prepared for:  
The City of Chula Vista  
June 9, 2014

Prepared by:  
HR&A Advisors, Inc.  
700 South Flower Street, Suite 2730  
Los Angeles, CA 90017





## Executive Summary

The development proposal for the University Village 3 North and Portion of Village 4 Sectional Planning Area (Village 3) includes 1,597 homes with a mixed-use retail, commercial and residential village core, industrial, parks, open space, and public facilities on a 436-acre site in Village 3 and a portion of Village 4.

The City of Chula Vista has retained HR&A Advisors (HR&A) to estimate the fiscal impacts of the development of Village 3 using the City's SPA Fiscal Impact Framework. The fiscal impact analysis will be included as part of the Public Facilities Financing Plan.

### Results

As presented in Figure 1, **Village 3 is expected to generate a positive annual net fiscal impact of \$401,000 in 2030 (Year 17) to the City of Chula Vista.**

Village 3 will generate annual fiscal revenues of approximately \$2.5 million in 2030 (Year 17). Property taxes are the greatest source of revenues, followed by MVLF In-Lieu revenues.

Village 3 is projected to generate \$2.1 million in annual fiscal costs to the City of Chula Vista in 2030 (Year 17). Public safety costs—police and fire—make up 64 percent of annual fiscal costs.

### Conclusions

The development generates annual net fiscal costs between 2014 and 2016 (Year 1 through Year 3), primarily due to the lag in property tax receipts. During this period, the project will generate a net fiscal cost to the City of Chula Vista totaling -\$164,000. **Village 3 generates a net fiscal revenue starting in 2017 (Year 4).** There is a one-time surge in annual fiscal impacts in 2019 (Year 6) due to property transfer tax from the last year of residential absorption. Thereafter, net fiscal revenues gradually increase as industrial acres and commercial acres are absorbed between 2018 and 2028 (Year 5 and Year 15).

**Figure 1: Village 3 - Net Fiscal Impact Summary**

	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
<i>2014 Dollar Inflation Factor</i>	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069
Total Expenditures	\$231,131	\$744,697	\$1,258,264	\$1,600,111	\$1,874,791	\$1,901,383	\$1,956,767	\$1,965,171	\$1,973,575	\$1,981,979
Total Revenues	\$197,631	\$656,079	\$1,216,811	\$1,661,425	\$1,992,622	\$2,141,631	\$2,123,495	\$2,153,724	\$2,176,134	\$2,204,209
<b>Net Fiscal Impacts (2014 Dollars)</b>	<b>(\$33,500)</b>	<b>(\$88,618)</b>	<b>(\$41,453)</b>	<b>\$61,313</b>	<b>\$117,831</b>	<b>\$240,248</b>	<b>\$166,728</b>	<b>\$188,553</b>	<b>\$202,559</b>	<b>\$222,229</b>

	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>
	<b>Year 11</b>	<b>Year 12</b>	<b>Year 13</b>	<b>Year 14</b>	<b>Year 15</b>	<b>Year 16</b>	<b>Year 17</b>
<i>2014 Dollar Inflation Factor</i>	1.069	1.069	1.069	1.069	1.069	1.069	1.069
Total Expenditures	\$1,990,384	\$2,016,976	\$2,043,568	\$2,070,160	\$2,080,805	\$2,080,805	\$2,080,805
Total Revenues	\$2,234,179	\$2,275,501	\$2,331,040	\$2,384,592	\$2,432,497	\$2,460,484	\$2,481,552
<b>Net Fiscal Impacts (2014 Dollars)</b>	<b>\$243,795</b>	<b>\$258,526</b>	<b>\$287,472</b>	<b>\$314,432</b>	<b>\$351,692</b>	<b>\$379,679</b>	<b>\$400,747</b>

Source: HR&A

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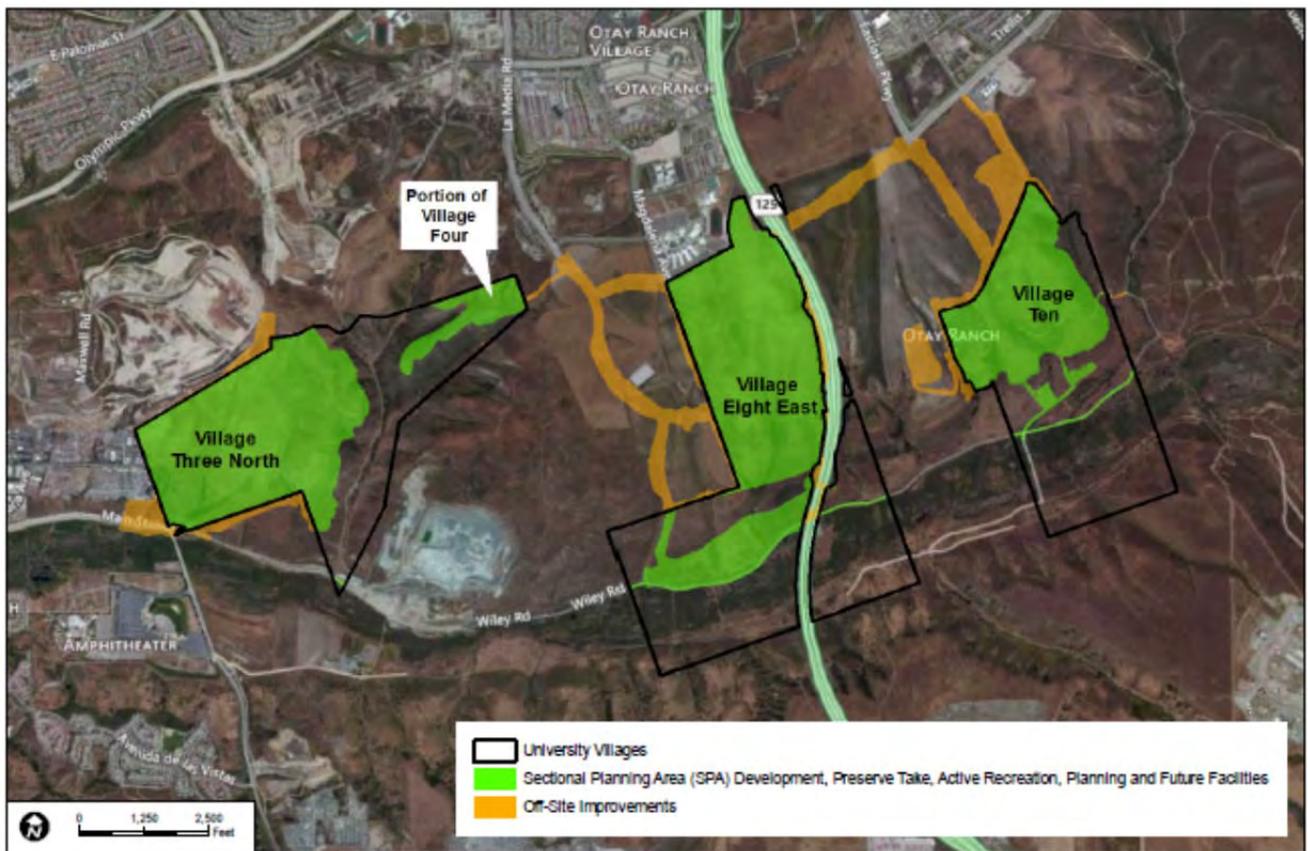
# Introduction

Otay Ranch is a master planned community in the City of Chula Vista established in 1993 under the Otay Ranch General Development Plan, located at the southern boundary of the city. This plan sets a framework for the development of nine villages, from which additional village plan areas have been subdivided.

The development proposal for the University Village 3 North and Portion of Village 4 Sectional Planning Area (Village 3) consists of the development of 1,597 homes with a mixed-use retail, commercial and residential village core, industrial, parks, open space, and public facilities on a 436-acre site in Village 3 and a portion of Village 4. Village 3 is being considered in conjunction with development proposals for two other University villages, as shown in Figure 2.

The City of Chula Vista has retained HR&A Advisors (HR&A) to estimate the fiscal impacts of the development of Village 3 using the City’s SPA Fiscal Impact Framework.

Figure 2: Map of University Villages



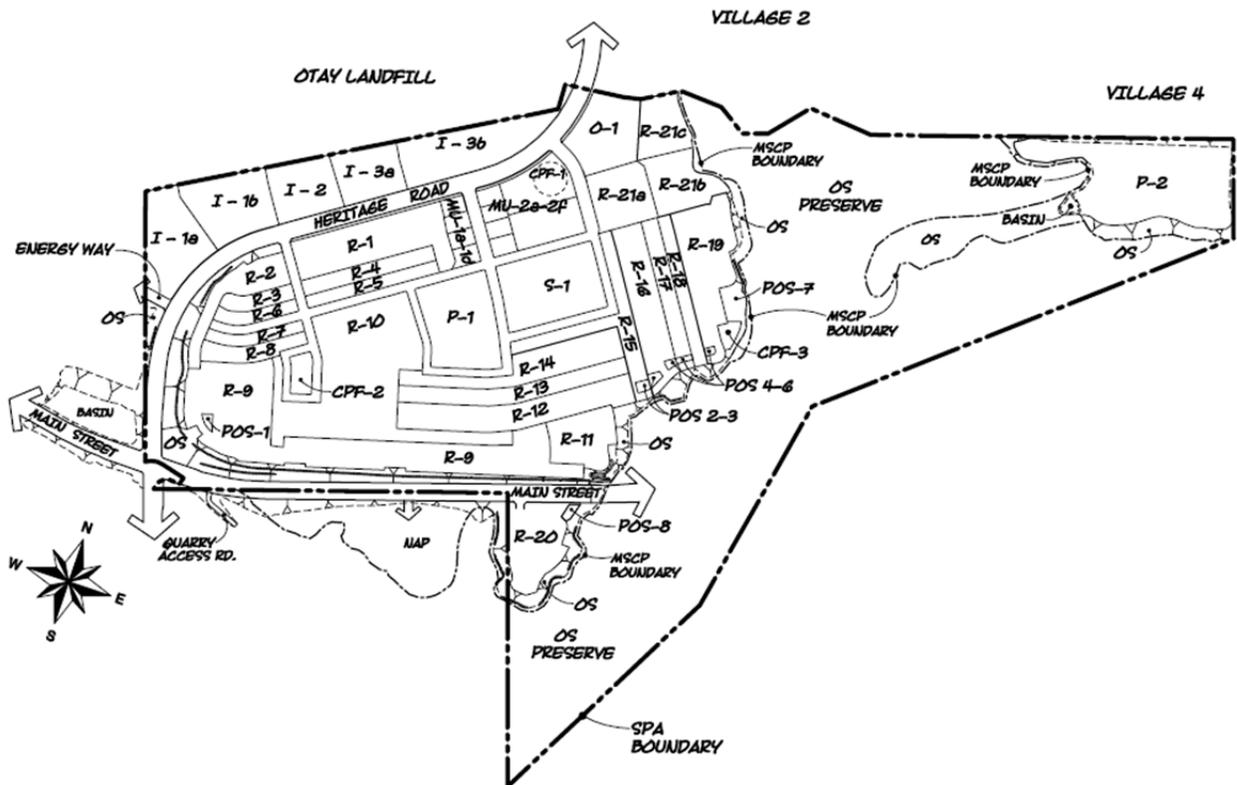
Source: Lenska Aerial Photography via Otay Ranch Homes (Developer)

# Project

The proposed Village 3 encompasses approximately 436 acres. Village 3 is located west of Wolf Canyon between the Otay River Valley and Otay Valle Regional Park to the South and the Otay Land Fill to the north. The portion of Village 4 included within the proposed project is located on the northeastern edge of Wolf Canyon north of the rock quarry.

The proposed project consists of both single-family and multi-family homes, surrounding a mixed-use retail and commercial core. Village 3 also includes a school, community purpose facilities, neighborhood parks, public open space and private open space, small recreation sites. Industrial uses are located within the plan area north of Heritage Road. The portion of Village 4 included in the plan, 29.7 acres, includes community parks and open space.

Figure 3: Otay Ranch University Village 3 Site Utilization Plan



Source: Otay Ranch Homes (Developer)

## **Land Use Program**

Village 3 is planned as a pedestrian-oriented urban village. The village includes a balance of residential, commercial, parks, public uses, and open space.

Village 3 includes 1,002 single family homes and 595 multi-family units. For purposes of this analysis, HR&A estimates that 25 percent of the multi-family units will be rental and 75 percent of multi-family units will be for-sale.

A mixed-use residential/retail component (MU-1) and commercial area (MU-2) are centrally located at the village core. The mixed-use area includes 20,000 square feet of commercial/retail uses and approximately 80 of the multi-family units. The commercial area is assumed to be 80 percent office and 20 percent retail and includes 4.2 acres of CPF<sup>1</sup> uses. In addition to the mixed-use commercial core, there are approximately 33.8 acres of industrial uses north of Heritage Road.

Village 3 also includes public and private open space and neighborhood parks. Public and private open spaces are both considered as open space. *It should be noted that the plan includes 25.7 acres of park uses, but to appropriately account for the fiscal costs generated by proposed development, the analysis includes only 15.2 required park acres. The park acres used in the analysis are based on requirements provided for the City of Chula Vista.*

Figure 4 presents the land uses by acres and units.

## **Population and Employment**

Figure 4 also presents the estimated population and employment of Village 3.

Population projections are based on the City of Chula Vista provided population per household estimate of 3.24 for both single-family and multi-family units.

Employees per acre are estimated based on industry benchmarks of square feet per employee and the average floor-to-area ratio for similar product in Chula Vista, shown in Appendix Table A-4.

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<sup>1</sup> The Developer has suggested that they may be interested in developing the CPF land into an educational training facility, which would generate additional revenues as a private use, but it is unclear whether this use can and will be located at the site. For the purposes of this analysis, we have included all CPF lands as CPF use according to the SPA Fiscal Impact Framework.

**Figure 4: Village 3 Land Use Program**

Land Use	Village 3 North	
	SPA	
Single Family Residential Units	1,002	(115.2 Ac.)
Multi-Family Residential Units	595	(12.90 Ac.)
MF Attached - For Sale	446	(7.6 Ac.)
MF Attached - Rental	69	(3.2 Ac.)
Mixed Use (Attached) Rental	80	(2.10 Ac.)
Industrial Acres	33.80	
Commercial Acres (MU2 Acres Only)	6.1	
Mixed Use Residential Commercial - Retail SF	20,000	
Park Acres (Required) <sup>1</sup>	15.2	
CPF	4.2	
School	8.3	
<b>Subtotal Developed Acres</b>	<b>195.7</b>	
Public Open Space	35.4	
Private Open Space	2.4	
Preserve	155.2	
Other Acres/ROW	36.8	
<b>Total Acres</b>	<b>425.5</b>	
<b>Population</b>		
Single Family Persons/DU@	3.24	3,246
Multi Family Persons/DU@	3.24	1,928
<b>Total Est. Population</b>		<b>5,174</b>
<b>Employment</b>		
Retail SF/Emp	400	50
Retail, employees per acre @	24	29
Industrial, employees per acres @	17.5	591
Office, employees per acres @	100	490
<b>Total Est. Employment</b>		<b>1,159</b>

<sup>1</sup> The village will include 25.7 park acres, but the analysis evaluates the fiscal impact of the required park acres, as shown.

Source: Otay Ranch Homes

### **Projected Absorption Schedule**

The projected absorption schedule is shown in Figure 5. The projected development absorption schedule for residential was provided by the developer. The absorption for commercial uses and the school was adapted based on an absorption schedule used for initial traffic studies for Village 3.

The projected absorption schedule anticipates the first units and public amenities are placed in service in 2014 (Year 1). Residential units are absorbed between 2014 and 2018 (Year 1 through Year 5). The mixed-use retail is expected to be absorbed at the end of the residential absorption schedule in 2017 and 2018 (Year 4 and Year 5). The commercial acres are anticipated to be absorbed in two three-year periods, between 2018 - 2020 (Year 5 – Year 7) and 2025 – 2027 (Year 12 – Year 14). Industrial acres are expected to be absorbed across an 11-year period, between 2018 and 2028 (Year 5 through Year 15).

Parks and CPF acres are absorbed in line with residential uses between 2014 and 2018 (Year 1 through Year 5), while preserve, right-of-way, and open space acres are absorbed in line with total developed acres between 2014 and 2028 (Year 1 through Year 15). The school is expected to be functional in 2020 (Year 7).

**Figure 5: Village 3 Projected Cumulative Land Use Absorption**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	
<b>Cumulative Land Use Program</b>																		
Single Family Residential Units	200	401	602	802	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002
Multi-Family Residential Units (Includes Multi-Use Residential)	0	255	510	595	595	595	595	595	595	595	595	595	595	595	595	595	595	595
MF For Sale	0	186	441	446	446	446	446	446	446	446	446	446	446	446	446	446	446	446
MF Rental	0	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Mixed Use (Attached) Rental	0	0	0	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Industrial Acres	0.0	0.0	0.0	0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.8	33.8	33.8	
Commercial Acres	-	-	-	-	1.0	2.0	3.1	3.1	3.1	3.1	3.1	4.1	5.1	6.1	6.1	6.1	6.1	
Mixed Use Retail SF	0	0	0	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	
Parks	2.7	6.1	9.5	12.5	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	
CPF	0.8	1.7	2.6	3.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
School	0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	
<b>Subtotal Developed Acres</b>	<b>26.5</b>	<b>59.5</b>	<b>92.4</b>	<b>121.1</b>	<b>151.6</b>	<b>155.6</b>	<b>167.9</b>	<b>170.9</b>	<b>173.9</b>	<b>176.9</b>	<b>179.9</b>	<b>183.9</b>	<b>187.9</b>	<b>191.9</b>	<b>195.7</b>	<b>195.7</b>	<b>195.7</b>	
Public Open Space (Public and Private)	5.1	11.5	17.9	23.4	29.3	30.0	32.4	33.0	33.6	34.2	34.7	35.5	36.3	37.1	37.8	37.8	37.8	
Preserve	21.0	47.2	73.3	96.0	120.2	123.4	133.1	135.5	137.9	140.3	142.6	145.8	149.0	152.2	155.2	155.2	155.2	
Other Acres/ROW	5.0	11.2	17.4	22.8	28.5	29.2	31.6	32.1	32.7	33.3	33.8	34.6	35.3	36.1	36.8	36.8	36.8	
<b>Total Acres</b>	<b>57.6</b>	<b>129.3</b>	<b>201.0</b>	<b>263.2</b>	<b>329.5</b>	<b>338.2</b>	<b>365.0</b>	<b>371.5</b>	<b>378.0</b>	<b>384.6</b>	<b>391.1</b>	<b>399.8</b>	<b>408.5</b>	<b>417.3</b>	<b>425.5</b>	<b>425.5</b>	<b>425.5</b>	
<b>Cumulative Population</b>																		
Single Family Persons/DU@	3.24	648	1,299	1,950	2,598	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246
Multi Family Persons/DU@	3.24	0	826	1,652	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	
Total Est. Population	648	2,125	3,603	4,526	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	
<b>Cumulative Employment</b>																		
Retail SF/Emp@	400.0	0	0	0	25	50	50	50	50	50	50	50	50	50	50	50	50	50
Retail, employees per acre @	23.5	0	0	0	0	5	10	14	14	14	14	19	24	29	29	29	29	
Industrial, employees per acres @	17.5	0	0	0	0	52	105	157	210	262	315	367	420	472	525	591	591	
Office, employees per acres @	100.4	0	0	0	0	82	163	245	245	245	245	327	408	490	490	490	490	
Total Est. Employment	0	0	0	25	189	328	467	519	572	624	676	815	954	1,093	1,159	1,159	1,159	

Source: Otay Ranch Homes, HR&A

# Methodology

This analysis evaluates the net fiscal impacts to the City of Chula Vista from the development of Village 3. Net fiscal impacts represent total annual fiscal revenues to the City of Chula Vista less annual fiscal costs.

The City of Chula Vista’s SPA Fiscal Impact Framework is used to estimate the net fiscal impacts of the plan. As prescribed in the SPA Fiscal Impact Framework, HR&A uses historical City of Chula Vista revenue and expenditure factors to estimate fiscal revenues and expenditures expected to grow proportionally with new development. Special analysis models are used to estimate revenues, such as property tax revenues, motor vehicle license fee (MVLFF) in lieu revenues, and sales taxes that may not grow proportionately with new development.

The detailed methodology of the SPA Fiscal Impact Framework is described in the memorandum “SPA Fiscal Analysis –Fiscal Model Methodology Including the Development of Fiscal Factors in the Analysis of SPA Proposals”, dated February 2008. The following methodology section highlights key inputs and updates made to the methodology for the Village 3 fiscal impact analysis.

## Budget and Revenue Factors

The budget revenue and expenditure factors provided by the City are based on the FY 2009 City of Chula Vista budget. Adjustments have been made to these budget factors to provide a more accurate accounting of future impacts, including: (1) an expenditure and revenue adjustment to account for appropriate service standards, (2) a retail expenditure density adjustment, and (3) a 2014 current dollar adjustment.

### Service Standard Adjustment (Real Inflation Adjustment)

Due to the 2007 recession, the City of Chula Vista implemented several rounds of budget reduction between FY 2007 and FY 2009, cutting the City’s service standard below the desired level. The expenditure and revenue adjustment factors use a 5-year average of inflation-adjusted per capita revenue and expenditures to determine an appropriate level of future expenditures and revenues. This adjustment is applied to the FY 2009 budget factors to bring them in line with the 5-year average service cost.

### Retail Expenditure Density Factor

Retail expenditure factors were developed based on historical citywide acres and account for a historical citywide floor-to-area (FAR) ratio. Based on the citywide FAR, a factor is determined that translates the retail expenditure budget factor from acres of land area into square feet of building area.

**Figure 6: Retail Expenditure Factor Density Adjustment**

<b>Land Use</b>	<b>Citywide Density</b>	<b>Acres to SF Density Factor</b>
Retail	0.28 FAR	0.00008

Source: City of Chula Vista, SPA Fiscal Framework

### 2014 Current Dollar Adjustment

Finally, given that the FIA is based on FY 2009 budget, the inflation adjustment adjusts final total revenues and expenditures from 2009 dollars to 2014 dollars. This adjustment is made in the final net fiscal impacts summary table.

## **Revenue Methodology**

Special models are used to estimate fiscal impacts for property taxes, property transfer taxes, MVLF in-lieu fees, sales tax. Special models were built based on the SPA Fiscal Framework with updated tax rates, as appropriate, and assessed value and household income inputs.

Other discretionary revenues, not estimated using special models, are estimated based on historical pro rata factors.

### Assessed Values and Property Taxes

The incremental assessed value attributable to Village 3 is used to estimate property taxes, property transfer taxes, and MVLF in-lieu fees. As described below, HR&A reviewed current market data for residential and commercial uses and reviewed the assessed value of comparable projects to determine appropriate assessed values to be applied in this analysis.

#### *Single-Family Residential Assessed Value*

Village 3 will include a variety of single family home types, on lot sizes ranging from 0.07 acres to 0.16 acres. HR&A reviewed sales prices for homes currently for sale or recently closed in Otay Ranch by subdivision, as reported by Meyers Data. Average prices were reviewed by quarter in 2013 and were then weighted by the number of sales that occurred in each quarter and in each development to determine an average sales price for Otay Ranch in 2013. Finally, this average was inflated by 2 percent to estimate single family home assessed values for 2014 applicable to this analysis. Detail on these sales are shown in Figure 7.

#### *Multi-Family Residential Assessed Value*

Village 8 will also include a significant component of multifamily housing, both for-sale and rental. Assessed value of for-sale units were derived through an analysis similar to what was conducted for single-family homes. The average sales price was based on sales data for 61 multifamily units in two developments, Avalon and Villas de Avila. Given that there were relatively few sales in one of these two developments, an un-weighted average price was calculated. As with single-family homes, this average was inflated by 2 percent to project values for 2014 applicable to this analysis. Detail on these sales is presented in Figure 8.

Rental unit assessed value is based on a market capitalization approach. The values of the rental units were derived by first estimating an average rent of \$1,950 per unit, based on an average of 21 apartment and townhouse rental listings on Zillow.com, as shown in Figure 9. Based on typical operating assumptions and market scan of multi-family real estate in suburban San Diego County, a vacancy rate of 5 percent, a gross expense estimate of 30 percent, and a capitalization rate of 5.5 percent were applied to derive the assessed value per unit. The assessed value of rental units is estimated at \$280,000. Detail on the assessed value calculation for rental units is included in Appendix Table A-5.

**Figure 7: Sales of Single Family Homes in Otay Ranch, 2013**

	Q1		Q2		Q3		Q4		Overall	
	# of Sales	Average Price								
Otay Ranch										
Anacapa			2	\$422,500					2	\$ 422,500
Bacara							10	\$420,900	10	\$ 420,900
Casitas de Avila	4	\$344,400							4	\$ 344,400
Corta Bella			9	\$428,425	7	\$454,400	7	\$465,650	23	\$ 447,660
Monte Sereno			4	\$569,900					4	\$ 569,900
Presidio V7			6	\$488,400	1	\$502,500			7	\$ 490,414
Santa Rita V2 R8			3	\$501,900	10	\$507,900	12	\$517,400	25	\$ 511,740
Terraza I V7			5	\$427,400					5	\$ 427,400
Terraza II V2			10	\$427,400					10	\$427,400
<i>Otay Ranch- Overall, Weighted Inflation-Adjusted</i>	4	\$344,400	39	\$457,116	18	\$486,794	29	\$471,633	90	\$462,720 \$471,974

\*Only sales for which a price is available are included  
Source: Meyers Research and HR&A

**Figure 8: Sales of Multifamily Units in Otay Ranch, 2013**

	Q1		Q2		Q3		Q4		Overall	
	# of Sales	Average Price								
Otay Ranch										
Avalon	17	\$255,900	12	\$284,900	8	\$307,900	14	\$310,400	51	\$ 285,841
Villas de Avila	10	\$311,400							10	\$ 311,400
<i>Otay Ranch- Average Inflation-Adjusted</i>	27	\$276,456	12	\$284,900	8	\$307,900	14	\$310,400	61	\$298,621 \$304,593

Source: Meyers Research and HR&A

**Figure 9: Listings for Apartment and Townhouse Rentals in Otay Ranch, March 2013**

Address	Type	Rent	SF	Rent/SF
1575 Rose Garden Ln	Townhouse	\$1,900	1,134	\$1.68
1460 Levant Ln, 1	Apartment	\$1,650	1,008	\$1.64
1460 Levant Ln, 6	Apartment	\$1,750	1,008	\$1.74
1863 Hazel Ct, Unit 11	Apartment	\$2,095	1,565	\$1.34
1810 Calvedos Dr	Townhouse	\$1,750	1,060	\$1.65
1480 Burgundy Dr	Townhouse	\$2,000	1,429	\$1.40
1484 Canvas Dr, Unit 5	Apartment	\$1,895	1,372	\$1.38
2144 Big Horn Dr, Unit 253	Townhouse	\$1,900	1,396	\$1.36
1476 Levant Ln	Townhouse	\$1,650	1,008	\$1.64
1894 Lorient Pl, 2524	Apartment	\$1,575	975	\$1.62
1894 Lorient Pl, 724	Apartment	\$1,650	975	\$1.69
1894 Lorient Pl, 1011	Apartment	\$1,875	1,315	\$1.43
1894 Lorient Pl, 1736	Apartment	\$1,995	1,315	\$1.52
	Apartment	\$1,695	1,008	\$1.68
1828 Olive Green St, Unit 7	Apartment	\$2,099	1,604	\$1.31
1737 Cripple Creek Dr, Unit 2	Apartment	\$2,250	1,728	\$1.30
2166 Nopalito Dr, Unit 69	Apartment	\$2,100	1,695	\$1.24
1884 Aquamarine Ct, Unit 10	Apartment	\$1,850	1,500	\$1.23
1670 Roadrunner Ct, Unit 258	Apartment	\$1,950	1,395	\$1.40
1627 Cliff Rose Dr, Unit 151	Apartment	\$2,195	1,561	\$1.41
1875 Cannes Pl	Apartment	\$2,040	1,400	\$1.46
<i>Otay Ranch- Overall, Weighted</i>		<i>\$1,935</i>	<i>1,307</i>	<i>\$1.48</i>

Source: Zillow.com and HR&A

*Retail Assessed Value*

The capitalized value approach was used to estimate the market value of retail properties as shown in Appendix Table A-5. The average rental rate for shopping center retail in the greater Eastlake retail submarket is approximately \$1.68 per gross leasable square foot according to CoStar. This average includes a variety of retail types and older developments. CoStar lists approximately ten recently built retail properties in east Chula Vista currently for lease with rates, as shown in Figure 10. These properties are used to estimate lease rates for commercial uses in each of the villages.

The commercial planned in each village is within a mixed use context. The mixed use commercial is most likely to be similar to mixed use retail such as Heritage Town Center at 1392 E. Palomar Street. For the mixed-use retail in Village 3, HR&A uses an average retail lease rent of \$1.85, and a conservative capitalization rate (cap rate) for a Class B to Class C product based on the CBRE's First Half of 2013 Capitalization Rate Survey. For the shopping center retail, HR&A uses an average retail lease rate of \$2.25 per square foot.

HR&A Advisors, Inc.



Heritage Town Center Mixed Use Retail

The capitalized value approach, as shown in Appendix Table A-5, provides an assessed value of approximately \$214.00 per square foot for the mixed use retail uses and an assessed value of approximately \$3.0 million per acre shopping center retail.

**Figure 10: East Chula Vista Retail Properties Currently For Lease**

Building Name	Building Address	Property Type	Rentable Building		Percent Leased	Average Monthly Weighted Rent
			Area	Year Built		
The Marketplace at Windingwalk	2110 Birch Rd	Community Center	8,686	2008	26.87	\$2.25
	1741 Eastlake Pky	Community Center	10,387	2008	62.74	\$2.25
	1745 Eastlake Pky	Community Center	106,000	2008	96.12	\$2.25
Heritage Town Center	2315 Otay Lakes Rd	Neighborhood Center	8,400	2004	82.9	\$3.50
	1392 E Palomar St	Mixed Use Retail	38,000	2003	93.61	\$1.95
	2318 Proctor Valley Rd	Neighborhood Center	12,109	2007	69.5	\$2.00
	2322 Proctor Valley Rd	Neighborhood Center	11,896	2007	57.91	\$2.00
	851-881 Showroom Pl	Community Center	162,967	2006	85.47	\$1.81
	891 Showroom Pl	Community Center	14,542	2006	87.19	\$2.45
<b>Average</b>					<b>73.59</b>	<b>\$2.27</b>

Source: CoStar and HR&A

#### *Industrial Assessed Value*

The capitalized value approach was used to estimate the market value of industrial properties as shown in Appendix Table A-5. HR&A reviewed current general industrial and industrial flex rental rates of available properties in the Otay Ranch/Chula Vista area to estimate projected prices in Village 3, as shown in Figure 11.

The monthly average lease rate for general industrial in the Otay Ranch area is \$0.58 per square foot. For the FIA, HR&A uses an average industrial lease rate of \$0.60 per square foot for general industrial.

The monthly average lease rate for industrial flex space in the Otay Ranch area is \$0.97 per square foot. For the FIA, HR&A uses an average industrial lease rate of \$0.95 per square foot for research/limited industrial.

The capitalized value approach, as shown in Appendix Table A-5, provides an assessed value of approximately \$1.0 million per acre for general industrial uses and an assessed value of approximately \$1.7 million per acre for research/limited industrial. For purposes of this analysis, we assume that 40 percent of industrial space will be general industrial and 60 percent will be limited/research industrial.

**Figure 11: Industrial Properties Currently for Lease**

<b>Building Address</b>	<b>Bldg Size</b>	<b>Year Built</b>	<b>Lease Rate Type</b>	<b>Monthly Lease Rate/SF</b>
<b>General Industrial</b>				
1710 Dornoch Court	86,592	1987	Industrial Gross	\$0.55
2515 Britannia Boulevard	39,569	2002	Industrial Gross	\$0.60
8578 & 8620 Avenida Costa Blanca	24,705	2002	Industrial Gross	\$0.60
<b>General Industrial Average</b>				<b>\$0.58</b>
<b>Industrial/Flex</b>				
821 Kuhn Drive	50,081	2004	Triple Net	\$1.25
8580 Avenida de la Fuente	31,695	2004	Industrial Gross	\$0.90
3441 Main Street	20,158	2004	Industrial Gross	\$0.88
3451 Main Street	86,831	2004	Industrial Gross	\$0.85
<b>Industrial Flex Average</b>				<b>\$0.97</b>

Source: CoStar, Loopnet, and HR&A

*Office Assessed Value*

Similar to industrial and retail uses, the capitalized value approach was used to estimate the market value of office properties as shown in Appendix Table A-5. HR&A reviewed office rental rates of available properties in the Otay Ranch/Chula Vista area to estimate projected prices in Village 3, as shown in Figure 12.

The monthly average monthly lease rate for office in the Otay Ranch area is \$1.97 per square foot. For the FIA, HR&A uses an average monthly office lease rate of \$2.00 per square foot for office. Using this average lease rate, the capitalized value approach, as shown in Appendix Table 4, provides an assessed value of approximately \$6.4 million per acre for office uses.

**Figure 12: Otay Ranch Area Office Properties Currently for Lease**

<b>Building Address</b>	<b>Bldg Size</b>	<b>Year Built</b>	<b>Lease Rate Type</b>	<b>Monthly Lease Rate/SF</b>
<b>Office</b>				
2080 Otay Lakes Rd	7,776	2007	Modified Gross	\$2.30
2082 Otay Lakes Rd	5,128	2007	Modified Gross	\$2.30
2082 Otay Lakes Rd	5,623	2007	Modified Gross	\$2.30
2084 Otay Lakes Rd	10,716	2007	Modified Gross	\$2.30
2086 Otay Lakes Rd	8,191	2007	Modified Gross	\$1.95
2088 Otay Lakes Rd	6,919	2007	Modified Gross	\$1.95
2088 Otay Lakes Rd	5,771	2007	Modified Gross	\$1.95
2090 Otay Lakes Rd	6,638	2007	Modified Gross	\$1.95
2090 Otay Lakes Rd	5,925	2007	Modified Gross	\$1.95
2555 Mast Way	1,674	2005	NA	\$1.25
900 Lane Ave	16,996	1987	Full Service	\$1.50
860 Kuhn Drive	22,665	2004	Triple Net	\$1.94
<b>Office Average</b>				<b>\$1.97</b>

NA=Not Available

Source: CoStar, Loopnet, and HR&A

*Property Tax Rate*

Village 3 is in San Diego County Tax Rate Area 01298. The City of Chula Vista captures 10.636% of the 1 percent property tax

Transfer taxes were assessed at \$0.55 per \$1,000 of assessed value, according to the City of Chula Vista rate.

### Property Tax Growth

It should be noted that the SPA Fiscal Impact Framework assumes that 5 to 10 percent of properties turnover each year and are inflated to a market value that increases by 2 percent, in real terms, a year.

The 2 percent estimate benchmarks the real inflation-adjusted average of California property growth across the long term (30+ years); actual annual value increases may vary.

### VLF Fees

Until July of 2011, 0.65 percent VLF revenues were estimated based on population increases while the property taxes in-lieu of VLF fees (“MVLF In-Lieu Fees”) are proportional to incremental growth in assessed value.

The State of California’s Legislature passed SB89 in 2011 that eliminates 0.65% VLF payments as of July 2011. The California League of Cities filed suit to challenge the law, but the State Superior Court recently ruled against the League in March of 2012.

The 0.65% VLF fees generated based on population have been excluded from this analysis. The MVLF In-Lieu Fees are still allocated proportionally, based on incremental growth in assessed value as described in the SPA Fiscal Impact Framework.

### Sales Tax

Sales taxes are estimated based on projected resident spending using the approach prescribed in the SPA Fiscal Impact Framework.

### Other Discretionary Revenues

As described above, revenue factors from the SPA Fiscal Impact Framework were used to estimate revenues that are expected to grow proportionally with development. These calculations are presented in Appendix Tables A-8 & A-9. These factors are summarized in Figure 13.

**Figure 13: Other Discretionary Revenue Factors**

<b>Summary of Other Discretionary Revenue Factors</b>	
Commercial (Per Acre)	\$839.44
Retail Commercial (Per SF)	\$0.07
Industrial (Per Acre)	\$759.37
Residential (Per Acre)	\$1,600.36
Residential (Per DU)	\$3.60
Employees (Per Employee)	\$19.45
Population (Per Resident)	\$3.86

Source: City of Chula Vista and HR&A

### **Expenditure Methodology**

As described above, expenditure factors from the SPA Fiscal Impact Framework were used to estimate expenditures that are expected to grow proportionally with development. The factors provided by the City of Chula Vista are summarized in Figure 14.

Special models are used to estimate the allocation of public safety fiscal expenditures generated by dwelling units. The public safety expenditures allocated to dwelling units are estimated proportionally (there are no adjustments at this time), but are presented in a special model because these costs are typically a major fiscal expenditure.

**Figure 14: Expenditure Factors and Public Safety Dwelling Unit Factors**

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<b>Expenditure Factors</b>	
Retail (Per SF)	\$1.36
Retail (Per Acre)	16,527.08
Office (Per Acre)	\$13,661.45
Industrial (Per Acre)	\$2,177.48
Population (Per Resident)	\$76.53
Open Space (Acres)	\$160.43
Public Parks (Acres)	\$2,448.06
Public Use (Per Acre)	\$2,710.85
Other (Per Acre)	\$2,759.40
Dwelling Unit Factor (Not including Public Safety)	\$119.40

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<b>Special Model Factors</b>	
Police (Per DU)	\$293.70
Fire (Per DU)	\$210.64

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Source: City of Chula Vista and HR&A

## Fiscal Impacts

The following section describes the fiscal impacts generated by development of Village 3. This fiscal impact analysis projects all fiscal revenues and fiscal expenditures to the City of Chula Vista as outlined in the City of Chula Vista's SPA Fiscal Impact Framework. The fiscal revenues are compared to the fiscal expenditures associated with Village 3 to estimate the net fiscal impact of the project. These are summarized in Figure 15. The figures in this table have been adjusted to reflect 2014 dollars. The detailed analysis is provided within the Appendix.

As described in the Methodology section, Figure 15 presents anticipated revenues estimated based on special models such as property taxes, MVLF in-lieu fee revenues, and sales and use tax, and other revenues calculated on a pro rata basis. Estimated expenditures are calculated and presented by land use category.

*Using the methodology described above, Village 3 will generate annual fiscal revenues of approximately \$2.5 million in 2030 (Year 17).*

Property taxes are the greatest source of revenues, followed by MVLF In-Lieu revenues. In 2030 (Year 17), property taxes and property transfer taxes combine to generate an estimated \$1.0 million annually. MVLF In-Lieu Fees are also based on growth in assessed value and are expected to generate approximately \$700,000 in annual fiscal receipts. Together, property-based taxes and MVLF In Lieu fees make up approximately 70 percent of total anticipated revenues. Sales tax, based on Village 3 residents spending in Chula Vista, is anticipated to support \$297,000 in annual fiscal receipts, 17 percent of total anticipated revenues.

*Village 3 is projected to generate \$2.1 million in annual fiscal costs to the City of Chula Vista. The greatest fiscal cost of the project will be public safety, which accounts for \$1.3 million (64% of costs at in 2030), accounting for allocations from housing units and other land uses.*

***In 2030 (Year 17), Village 3 is expected to generate an annual positive net fiscal impact of approximately \$401,000 to the City of Chula Vista.*** The development generates annual net fiscal costs between 2014 and 2016 (Year 1 through Year 3), totaling -\$164,000. Annual net fiscal costs start at -\$34,000 in the first year, due to the lag in property tax receipts, and grow to -\$89,000 in 2015 (Year 2). Annual net fiscal costs decrease to -\$42,000 in 2016 (Year 3) and an annual net fiscal revenue is projected in 2017 (Year 4).

2018 (Year 5) is the last year of residential absorption and absorption of the mixed-use retail. This year also includes the absorption of the first year of industrial and commercial (office/retail), resulting in a jump in net fiscal revenue in 2019 (Year 6). Property transfer revenues, and overall net fiscal impacts, decline in 2020 and 2021 (Year 7 and Year 8), after the absorption of the residential uses. Net fiscal impacts grow gradually after 2021 (Year 8), in line with real growth in property values and the absorption of commercial and industrial acres<sup>2</sup>.

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<sup>2</sup> As described in the Methodology section, it should be noted that the model assumes that 5 to 10 percent of properties turnover and are inflated to a market value that increases by 2 percent, in real terms, a year. 2 percent represents the real inflation-adjusted average of California property growth across the long term (30+ years). Actual annual value increases may vary which will impact annual net fiscal results.  
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**Figure 15: Village 3 Fiscal Impact**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
<i>2014 Dollar Inflation Factor</i>	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069	1.069
<b>Revenues</b>																	
Property Taxes	\$0	\$107,322	\$300,492	\$500,238	\$642,739	\$771,916	\$788,048	\$804,318	\$815,840	\$828,536	\$842,347	\$857,219	\$881,196	\$906,322	\$932,573	\$952,900	\$966,579
Property Transfer Taxes	\$0	\$55,496	\$108,152	\$121,233	\$101,871	\$101,975	\$47,880	\$49,171	\$46,552	\$47,629	\$48,730	\$49,856	\$55,275	\$56,756	\$58,274	\$56,177	\$53,273
MVLF Revenues	\$76,548	\$214,329	\$356,800	\$458,440	\$550,577	\$562,083	\$573,688	\$581,906	\$590,962	\$600,812	\$611,420	\$628,522	\$646,443	\$665,167	\$679,666	\$689,422	\$699,716
Sales and Use Tax	\$71,924	\$164,458	\$271,575	\$345,816	\$403,971	\$405,028	\$406,085	\$406,485	\$406,884	\$407,283	\$407,683	\$408,740	\$409,797	\$410,854	\$411,360	\$411,360	\$411,360
Other Revenues	\$49,158	\$114,475	\$179,793	\$235,698	\$293,464	\$300,628	\$307,793	\$311,844	\$315,896	\$319,948	\$323,999	\$331,164	\$338,329	\$345,493	\$350,625	\$350,625	\$350,625
<b>Total Annual Revenues</b>	<b>\$197,631</b>	<b>\$656,079</b>	<b>\$1,216,811</b>	<b>\$1,661,425</b>	<b>\$1,992,622</b>	<b>\$2,141,631</b>	<b>\$2,123,495</b>	<b>\$2,153,724</b>	<b>\$2,176,134</b>	<b>\$2,204,209</b>	<b>\$2,234,179</b>	<b>\$2,275,501</b>	<b>\$2,331,040</b>	<b>\$2,384,592</b>	<b>\$2,432,497</b>	<b>\$2,460,484</b>	<b>\$2,481,552</b>
<b>Expenditures</b>																	
Retail (SF)	\$0	\$0	\$0	\$16,957	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914	\$33,914
Retail (Acres)	\$0	\$0	\$0	\$0	\$4,205	\$8,411	\$12,616	\$12,616	\$12,616	\$12,616	\$12,616	\$16,821	\$21,027	\$25,232	\$25,232	\$25,232	\$25,232
Office (Acres)	\$0	\$0	\$0	\$0	\$13,905	\$27,809	\$41,714	\$41,714	\$41,714	\$41,714	\$41,714	\$55,619	\$69,523	\$83,428	\$83,428	\$83,428	\$83,428
Industrial (Acres)	\$0	\$0	\$0	\$0	\$8,175	\$16,349	\$24,524	\$32,699	\$40,873	\$49,048	\$57,223	\$65,397	\$73,572	\$81,747	\$92,101	\$92,101	\$92,101
Park (Acres)	\$8,380	\$18,817	\$29,253	\$38,305	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685	\$46,685
Population (Persons)	\$62,057	\$203,546	\$345,035	\$433,465	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522	\$495,522
Open Space (Acres)	\$2,027	\$4,551	\$7,075	\$9,264	\$11,598	\$11,906	\$12,848	\$13,078	\$13,308	\$13,537	\$13,767	\$14,074	\$14,381	\$14,689	\$14,980	\$14,980	\$14,980
Public Use (Acres)	\$2,557	\$5,743	\$8,928	\$11,690	\$14,248	\$14,248	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404	\$42,404
Expenditures Allocated to DUs (excl. Public Safety)	\$29,884	\$98,021	\$166,158	\$208,743	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628	\$238,628
Public Safety Costs Alloc. to DUs	\$126,226	\$414,020	\$701,815	\$881,686	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912	\$1,007,912
<b>Total Annual Expenditures</b>	<b>\$231,131</b>	<b>\$744,697</b>	<b>\$1,258,264</b>	<b>\$1,600,111</b>	<b>\$1,874,791</b>	<b>\$1,901,383</b>	<b>\$1,956,767</b>	<b>\$1,965,171</b>	<b>\$1,973,575</b>	<b>\$1,981,979</b>	<b>\$1,990,384</b>	<b>\$2,016,976</b>	<b>\$2,043,568</b>	<b>\$2,070,160</b>	<b>\$2,080,805</b>	<b>\$2,080,805</b>	<b>\$2,080,805</b>
<b>Net Fiscal Impact</b>	<b>(\$33,500)</b>	<b>(\$88,618)</b>	<b>(\$41,453)</b>	<b>\$61,313</b>	<b>\$117,831</b>	<b>\$240,248</b>	<b>\$166,728</b>	<b>\$188,553</b>	<b>\$202,559</b>	<b>\$222,229</b>	<b>\$243,795</b>	<b>\$258,526</b>	<b>\$287,472</b>	<b>\$314,432</b>	<b>\$351,692</b>	<b>\$379,679</b>	<b>\$400,747</b>

Source: HR&A

# Appendix

**Table A-1  
Proposed Land Uses**

<b>Land Use</b>	<b>Village 3 North</b>	
	<b>SPA</b>	
Single Family Residential Units	1,002	(115.2 Ac.)
Multi-Family Residential Units	595	(12.90 Ac.)
<i>MF Attached - For Sale</i>	446	(7.6 Ac.)
<i>MF Attached - Rental</i>	69	(3.2 Ac.)
<i>Mixed Use (Attached) Rental</i>	80	(2.10 Ac.)
Industrial Acres	33.80	
Commercial Acres (MU2 Acres Only)	6.1	
Mixed Use Residential Commercial - Retail SF	20,000	
Park Acres (Required) <sup>1</sup>	15.2	
CPF	4.2	
School	8.3	
<b>Subtotal Developed Acres</b>	<b>195.7</b>	
Public Open Space	35.4	
Private Open Space	2.4	
Preserve	155.2	
Other Acres/ROW	36.8	
<b>Total Acres</b>	<b>425.5</b>	
<b>Population</b>		
Single Family Persons/DU@	3.24	3,246
Multi Family Persons/DU@	3.24	1,928
<b>Total Est. Population</b>		<b>5,174</b>
<b>Employment</b>		
Retail SF/Emp	400	50
Retail, employees per acre @	24	29
Industrial, employees per acres @	17.5	591
Office, employees per acres @	100	490
<b>Total Est. Employment</b>		<b>1,159</b>

<sup>1</sup>The village will include 25.7 park acres, but the analysis evaluates the fiscal impact of the required park acres, as shown.

Source: Otay Ranch New Homes, City of Chula Vista and HR&A

**Table A-2  
Proposed Land Use Absorption**

		Village 3 North SPA																
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
<b>Cumulative Land Use Program</b>																		
Single Family Residential Units		200	401	602	802	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002
Multi-Family Residential Units (Includes Multi-Use Residential)		0	255	510	595	595	595	595	595	595	595	595	595	595	595	595	595	595
MF For Sale		0	186	441	446	446	446	446	446	446	446	446	446	446	446	446	446	446
MF Rental		0	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Mixed Use (Attached) Rental		0	0	0	80	80	80	80	80	80	80	80	80	80	80	80	80	80
Industrial Acres		0.0	0.0	0.0	0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.8	33.8	33.8
Commercial Acres		-	-	-	-	1.0	2.0	3.1	3.1	3.1	3.1	3.1	4.1	5.1	6.1	6.1	6.1	6.1
Mixed Use Retail SF		0	0	0	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Parks		2.7	6.1	9.5	12.5	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
CPF		0.8	1.7	2.6	3.4	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
School		0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
<i>Subtotal Developed Acres</i>		26.5	59.5	92.4	121.1	151.6	155.6	167.9	170.9	173.9	176.9	179.9	183.9	187.9	191.9	195.7	195.7	195.7
Public Open Space (Public and Private)		5.1	11.5	17.9	23.4	29.3	30.0	32.4	33.0	33.6	34.2	34.7	35.5	36.3	37.1	37.8	37.8	37.8
Preserve		21.0	47.2	73.3	96.0	120.2	123.4	133.1	135.5	137.9	140.3	142.6	145.8	149.0	152.2	155.2	155.2	155.2
Other Acres/ROW		5.0	11.2	17.4	22.8	28.5	29.2	31.6	32.1	32.7	33.3	33.8	34.6	35.3	36.1	36.8	36.8	36.8
<b>Total Acres</b>		57.6	129.3	201.0	263.2	329.5	338.2	365.0	371.5	378.0	384.6	391.1	399.8	408.5	417.3	425.5	425.5	425.5
<b>Cumulative Population</b>																		
Single Family Persons/DU@	3.24	648	1,299	1,950	2,598	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246	3,246
Multi Family Persons/DU@	3.24	0	826	1,652	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928	1,928
Total Est. Population		648	2,125	3,603	4,526	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174
<b>Cumulative Employment</b>																		
Retail SF/Emp@	400.0	0	0	0	25	50	50	50	50	50	50	50	50	50	50	50	50	50
Retail, employees per acre @	23.5	0	0	0	0	5	10	14	14	14	14	14	19	24	29	29	29	29
Industrial, employees per acres @	17.5	0	0	0	0	52	105	157	210	262	315	367	420	472	525	591	591	591
Office, employees per acres @	100.4	0	0	0	0	82	163	245	245	245	245	245	327	408	490	490	490	490
Total Est. Employment		0	0	0	25	189	328	467	519	572	624	676	815	954	1,093	1,159	1,159	1,159

Source: Otay Ranch New Homes and HR&A

**Table A-3**  
**Chula Vista - Expenditure Real Inflation Adjustment<sup>1</sup>**

	2005	2006	2007	2008	2009	5 Year Average
Population	216,961	223,604	227,850	231,157	234,011	
Households	70,916	73,365	74,527	75,259	75,752	
City Staff	1,169	1,227	1,264	1,249	1,110	
Revenues (Actuals)	\$137,763,583	\$157,809,965	\$161,564,721	\$153,938,093	\$140,502,938	
Expenditures (Actuals)	\$142,195,531	\$160,826,968	\$166,056,406	\$155,021,736	\$140,365,277	
CPI (San Diego Area)	220.6	228.1	233.3	242.3	242.3	
Expenditure/Capita	\$655.40	\$719.25	\$728.80	\$670.63	\$599.82	
Revenues/Capita	\$634.97	\$705.76	\$709.08	\$665.95	\$600.41	
2009 CPI Adjustment Factor	1.10	1.06	1.04	1.00	1.00	
Exp/Cap in 2009 Dollars	\$719.87	\$764.02	\$756.91	\$670.63	\$599.82	
Rev/Cap in 2009 Dollars	\$697.43	\$749.69	\$736.44	\$665.95	\$600.41	
Expenditure Adjustment Factor	120%	127%	126%	112%	100%	117%
Revenue Adjustment Factor (Relative to 2009 Levels)	116%	125%	123%	111%	100%	115%

<sup>1</sup> Provided by the City of Chula Vista

Source: City of Chula Vista and HR&A

**Table A-4  
Employment Density Calculation**

Land Use	FAR	Units Per	Employment Factor	Building		Employees/ Acre
	Estimate	Acre		Efficiency	Occupancy	
Retail	0.30 FAR	13,068	400 SF/Emp	80%	90%	23.52
Office	0.80 FAR	34,848	250 SF/Emp	80%	90%	100.36
General Industrial	0.35 FAR	15,246	1000 SF/Emp	90%	90%	12.35
Research/Limited Industrial	0.40 FAR	17,424	600 SF/Emp	80%	90%	20.91

Source: City of Chula Vista, CoStar, HR&A

**Table A-5  
Commercial Assessed Value Calculation**

Commercial Land Uses	FAR Estimate	Units Per Acre	Mo. Rent /SF	Building Efficiency	Occupancy Rate	Admin /	Net Income/SF	Cap Rate	Assessed Value Per Unit
						Vacancy Cost			
Mixed Use Retail			\$1.85	90%	90%	5%	\$17.08	8.0%	\$213.54 Per SF
Shopping Center Retail	0.30 FAR	13,068 SF	\$2.25	80%	90%	5%	\$18.47	8.0%	\$3,016,748 Per Acre
Office	0.80 FAR	34,848 SF	\$2.00	80%	90%	20%	\$13.82	7.50%	\$6,423,183 Per Acre
General Industrial	0.35 FAR	15,246 SF	\$0.60	90%	90%	10%	\$5.25	7.75%	\$1,032,557 Per Acre
Research/Limited Industrial	0.40 FAR	17,424 SF	\$0.95	80%	90%	10%	\$7.39	7.75%	\$1,660,833 Per Acre
Rental Residential Land Use			Avg. Monthly Rent/Unit	Avg. Annual Rent/Unit	Occupancy Rate	Gross Expense Estimate	Net Income/Unit	Cap Rate	Assessed Value per Unit
Rental Apartments			\$1,935.00	\$23,220	95%	30%	\$15,441	5.50%	\$280,751 Per Unit

Source: CoStar, CB Richard Ellis Cap Rate Survey, Developers and HR&A

**Table A-6**  
**Citywide Cost Factors by Function/Department<sup>1</sup>**

	Population (Per Person)	Retail (Per Acre)	Office (Per Acre)	Hotel (Per Acre)	Industrial (Per Acre)	Land Uses		Public Use (Per Acre)	Open Space (Per Acre)	Other (Per Acre)	Residential (Per DU)
						Parks ( per acre) Private	Public				
<b>Legislative and Administration</b>											
City Council	\$2.00										
<b>Boards and Commissions</b>											
City Clerk	\$1.37										
City Attorney		\$80.11	\$86.52	\$51.21	\$21.13						\$12.11
Administration	\$0.29										\$0.35
Management and Information Services	\$4.60										
Human Resources											
<b>Development and Maintenance Services</b>											
Economic Development Function	\$0.00	\$301.43	\$325.55	\$192.68	\$79.51					\$0.00	
Planning and Building Services	\$0.00	\$203.44	\$219.57	\$130.70	\$55.00					\$31.70	\$30.69
Engineering		\$274.44	\$145.29	\$64.57	\$27.44		\$15.53			\$16.85	\$3.07
Public Works		\$5,914.17	\$3,131.03	\$1,391.57	\$591.42		\$69.58	\$347.89		\$347.89	\$68.43
General Services											
<b>Public Safety</b>											
Police (Excluding Residential)	\$11.01	\$6,836.27	\$6,836.27	\$6,836.27	\$1,006.09		\$2,202.49	\$2,202.49		\$2,202.49	
Fire (Excluding Residential)	\$1.05	\$2,917.22	\$2,917.22	\$2,917.22	\$396.88	\$160.46	\$160.46	\$160.46	\$160.46	\$160.46	
<b>Culture and Leisure</b>											
Parks and Recreation	\$18.90										
Library	\$37.32										\$4.77
Nature Center											
<b>Sub-Total Unit Cost</b>	<b>\$76.53</b>	<b>\$16,527.08</b>	<b>\$13,661.45</b>	<b>\$11,584.21</b>	<b>\$2,177.48</b>	<b>\$160.46</b>	<b>\$2,448.06</b>	<b>\$2,710.85</b>	<b>\$160.46</b>	<b>\$2,759.40</b>	<b>\$119.40</b>
Acre to SF Density Adjustment Factors		0.00008									
<b>Total - Density Adjusted Unit Costs</b>	<b>\$76.53</b>	<b>\$1.36</b>	<b>\$13,661.45</b>	<b>\$11,584.21</b>	<b>\$2,177.48</b>	<b>\$160.46</b>	<b>\$2,448.06</b>	<b>\$2,710.85</b>	<b>\$160.46</b>	<b>\$2,759.40</b>	<b>\$119.40</b>

<sup>1</sup>All Cost Factors and Subtotal Cost factors provided by the City

Source: City of Chula Vista and HR&A

**Table A-7  
Dwelling Unit Public Safety Costs**

Village 3 North SPA																		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	
Project Residential Units	200	656	1,112	1,397	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	
<u>Current Service Costs</u>																		
Police Service Costs/ DU	\$293.70																	
Fire Service Costs/ DU	\$210.64																	
<u>Annual Public Safety (Allocated to Project Dwelling Units)</u>																		
Police	\$58,740	\$192,667	\$326,594	\$410,299	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	\$469,039	
Fire	\$42,128	\$138,180	\$234,232	\$294,264	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	\$336,392	
<b>Total Annual Public Safety Costs</b>	<b>\$100,868</b>	<b>\$330,847</b>	<b>\$560,826</b>	<b>\$704,563</b>	<b>\$805,431</b>													

Source: City of Chula Vista and HR&A

**Table A-8**  
**City of Chula Vista - Discretionary Revenues (Based on the FY 2009 Amended Budget)**

Non-Departmental Revenue Categories	Discretionary Revenues		Program Revenues (Estimate)	Net Revenues	Revenue Distribution	
	Amended	Budget 2009			Fixed Revenues	Variable Revenues
Property Taxes						
Current Taxes - Secured		\$28,363,165		\$28,363,165		\$28,363,165
State Secured - Unitary		\$300,000		\$300,000		\$300,000
Current Taxes - Unsecured		\$979,200		\$979,200		\$979,200
Delinquent Taxes		\$590,000		\$590,000		\$590,000
<i>Subtotal</i>		\$30,232,365	\$0	\$30,232,365	\$0	\$30,232,365
Other Local Taxes						
Sales and Use Taxes		\$29,677,977		\$29,677,977		\$29,677,977
Franchise Fees		\$8,732,093		\$8,732,093		\$8,732,093
Utility Taxes		\$7,122,095		\$7,122,095		\$7,122,095
Business License Tax		\$1,322,847		\$1,322,847		\$1,322,847
Transient Occupancy Taxes		\$2,752,514		\$2,752,514		\$2,752,514
Real Property Transfer Tax		\$841,402		\$841,402		\$841,402
<i>Subtotal</i>		\$50,448,928	\$0	\$50,448,928	\$0	\$50,448,928
Use of Money and Property						
<i>Subtotal</i>		\$4,163,212	\$0	\$4,163,212	\$4,163,212	\$0
Revenues from other Agencies						
Sales Tax: Public Safety Augment		\$875,347		\$875,347		\$875,347
State Homeowners Property Tax Relief		\$282,800		\$282,800		\$282,800
State Motor Vehicle Licenses		\$20,215,866		\$20,215,866		\$20,215,866
Other Revenues from other Agencies		\$4,324,532		\$4,324,532		\$4,324,532
<i>Subtotal</i>		\$25,698,545		\$25,698,545		\$25,698,545
Charges for Services <sup>1</sup>						
<i>Subtotal</i>		\$8,854,774	\$0	\$8,854,774	\$8,854,774	\$0
Other Revenues (less CIP) <sup>2</sup>						
<i>Subtotal</i>		\$10,580,609	\$0	\$10,580,609	\$10,580,609	\$0
Transfers In						
<i>Subtotal</i>		\$12,272,473	\$0	\$12,272,473	\$12,272,473	\$0
<b>Total Discretionary Revenues (Less CIP Transfers)</b>		<b>\$142,250,906</b>	<b>\$0</b>	<b>\$142,250,906</b>	<b>\$35,871,068</b>	<b>\$106,379,838</b>

<sup>1</sup>Includes Licenses and Permits

<sup>2</sup>Other Revenue excludes funds from the CIP fund. Fines, Forfeitures, and Penalties are included in this category.

Source: City of Chula Vista

**Table A-9**  
**Chula Vista - Other Discretionary Revenue Allocation Factors (Based on 2009 Information)**

<b>2009 Citywide Conditions</b>				
Population	226,694			
Dwelling Units	78,615			
Employees	71,153			
<b>Land Uses</b>	<b>Developed Acres</b>	<b>Employees (estimated)</b>	<b>AV Share (Estimates)</b>	
Commercial (Retail and Office)	2,048	46,842	25%	
Industrial	917	21,162	8%	
Residential	9,565		67%	
Subtotal Taxable	12,530	68,004		
Other (Parks, Public/Quasi-public, Open Space)	7,171	3,149		
Total	19,702	71,153		
<b>Incremental Revenue Factors by Development Unit</b>				
<b>Revenue Category</b>	<b>2009 Revenues</b>	<b>Allocation Method</b>	<b>Share</b>	<b>Allocation Units</b>
<b>Property Taxes</b>				
Current Taxes - Secured	\$28,363,165	Calculated Separately		
State Secured - Unitary	\$300,000	Commercial AV	25%	\$36.61 Acres
		Industrial AV	8%	\$26.17 Acres
		Residential AV	67%	\$21.01 Acres
Current Taxes - Unsecured	\$979,200	Commercial AV	25%	\$119.51 Acres
		Industrial AV	8%	\$85.42 Acres
		Residential AV	67%	\$68.59 Acres
Delinquent Taxes	\$590,000	Commercial AV	25%	\$72.01 Acres
		Industrial AV	8%	\$51.47 Acres
		Residential AV	67%	\$41.33 Acres
<b>Other Local Taxes</b>				
Sales and Use Taxes	\$29,677,977	Calculated Separately		
Franchise Fees <sup>1</sup>	\$8,732,093	Commercial Land	7%	\$298.40 Acres
		Industrial Land	3%	\$285.66 Acres
		Residential Land	90%	\$821.63 Acres
Utility Taxes <sup>1</sup> with Adjustment	\$7,122,095	Commercial Land	9%	\$312.92 Acres
		Industrial Land	4%	\$310.65 Acres
		Residential Land	87%	\$647.80 Acres
Business License Tax	\$1,322,847	Employees (Non-Public)		\$19.45 Employees
Transient Occupancy Taxes	\$2,752,514	Not Included		
Real Property Transfer Tax	\$841,402	Calculated Separately		
<b>Revenues from Other Agencies</b>				
Sales Tax: Public Safety Augment	\$875,347	People		\$3.86 Person
State Homeowners Property Tax Relief	\$282,800	Dwelling Units		\$3.60 DU
State Motor Vehicle Licenses	\$20,215,866	Calculated Separately		
<b>Total Discretionary Revenues</b>	<b>\$102,055,306</b>			
<b>Summary of Other Discretionary Revenue Factors</b>				
Commercial (Acres)	\$839.44			
Retail Commercial (SF)	\$0.07			
Industrial (Acres)	\$759.37			
Residential (Acres)	\$1,600.36			
Residential (DU)	\$3.60			
Employees	\$19.45			
Population	\$3.86			

<sup>1</sup> As presented in SPA Fiscal Impact Framework, allocation share by land use based on FIND model estimates

Source: City of Chula Vista and HR&A

**Table A-10**  
**Projected Program Assessed Value**

		Village 3 North SPA																
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Cumulative Program Assessed Value	Est. Assessed Value Per Unit (Millions \$)																	
<b>Land Use</b>																		
Single Family Residential Units	\$ 472,000	\$94.4	\$189.3	\$284.1	\$378.5	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9	\$472.9
MF For-Sale	\$305,000	0.0	56.7	134.5	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0	136.0
<b>Total For Sale Product</b>		<b>\$94.4</b>	<b>\$246.0</b>	<b>\$418.6</b>	<b>\$514.6</b>	<b>\$609.0</b>												
Rental Residential - MF	\$280,000	\$0.0	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3	\$19.3
Rental Residential - MF Mixed Use	\$280,000	0.0	0.0	0.0	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4	22.4
Industrial Acres	\$1,410,000	0.0	0.0	0.0	0.0	4.2	8.5	12.7	16.9	21.2	25.4	29.6	33.8	38.1	42.3	47.7	47.7	47.7
Office Acres	\$6,423,000	0.0	0.0	0.0	0.0	5.2	10.4	15.7	15.7	15.7	15.7	15.7	20.9	26.1	31.3	31.3	31.3	31.3
Retail Commercial Acres	\$3,017,000	0.0	0.0	0.0	0.0	0.6	1.2	1.8	1.8	1.8	1.8	1.8	2.5	3.1	3.7	3.7	3.7	3.7
Mixed Use Retail Commercial SF	\$214	0.0	0.0	0.0	2.1	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
<b>Total Income Generating Product</b>		<b>\$0.0</b>	<b>\$19.3</b>	<b>\$19.3</b>	<b>\$43.86</b>	<b>\$56.1</b>	<b>\$66.1</b>	<b>\$76.2</b>	<b>\$80.4</b>	<b>\$84.7</b>	<b>\$88.9</b>	<b>\$93.1</b>	<b>\$103.2</b>	<b>\$113.2</b>	<b>\$123.3</b>	<b>\$128.7</b>	<b>\$128.7</b>	<b>\$128.7</b>
<b>Total Assessed Value</b>		<b>\$94.4</b>	<b>\$265.3</b>	<b>\$438.0</b>	<b>\$558.4</b>	<b>\$665.0</b>	<b>\$675.1</b>	<b>\$685.2</b>	<b>\$689.4</b>	<b>\$693.6</b>	<b>\$697.9</b>	<b>\$702.1</b>	<b>\$712.2</b>	<b>\$722.2</b>	<b>\$732.3</b>	<b>\$737.6</b>	<b>\$737.6</b>	<b>\$737.6</b>

Source: HR&A

**Table A-11**  
**Property Tax Estimate**

Village 3 North SPA

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	
	(Value)																	
Annual For Sale Product AV (Millions)	\$94.4	\$151.6	\$172.6	\$95.9	\$94.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Annual Income Generating Product AV (Millions)	\$0.0	\$19.3	\$0.0	\$24.5	\$12.2	\$10.1	\$10.1	\$4.2	\$4.2	\$4.2	\$4.2	\$10.1	\$10.1	\$10.1	\$5.4	\$0.0	\$0.0	
<b>Appreciation Factor:</b>	<b>Annual Rate</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Yr 11</b>	<b>Yr 12</b>	<b>Yr 13</b>	<b>Yr 14</b>	<b>Yr 15</b>	<b>Yr 16</b>	<b>Yr 17</b>
Real Appreciation Rate	2.00%	100%	102%	104%	106%	108%	110%	113%	115%	117%	120%	122%	124%	127%	129%	132%	135%	137%
Proposition 13 AV Limitation less Inflation of 2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Residential Annual Turnover Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Commercial Turnover Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
<b>For Sale Residential Product</b>																		
Year Property First Sold:																		
Yr 1	\$94.4	\$94.6	\$95.0	\$95.5	\$96.1	\$97.0	\$97.9	\$98.9	\$100.1	\$101.4	\$102.7	\$104.2	\$105.8	\$107.4	\$109.1	\$110.9	\$112.8	
Yr 2		\$154.6	\$154.9	\$155.5	\$156.4	\$157.5	\$158.8	\$160.3	\$162.1	\$164.0	\$166.1	\$168.3	\$170.7	\$173.2	\$175.9	\$178.7	\$181.7	
Yr 3			\$179.62	\$180.0	\$180.7	\$181.7	\$182.9	\$184.5	\$186.3	\$188.3	\$190.5	\$192.9	\$195.5	\$198.3	\$201.2	\$204.4	\$207.6	
Yr 4				\$101.8	\$102.0	\$102.4	\$103.0	\$103.7	\$104.5	\$105.6	\$106.7	\$108.0	\$109.3	\$110.8	\$112.4	\$114.0	\$115.81	
Yr 5					\$102.2	\$102.4	\$102.8	\$103.3	\$104.1	\$104.9	\$106.0	\$107.1	\$108.4	\$109.7	\$111.2	\$112.8	\$114.5	
Yr 6						\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Yr 7							\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Yr 8								\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Yr 9									\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Yr 10										\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Yr 11											\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Yr 12												\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Yr 13													\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Yr 14														\$0.00	\$0.00	\$0.00	\$0.00	
Yr 15															\$0.00	\$0.00	\$0.00	
Yr 16																\$0.00	\$0.00	
Yr 17																	\$0.00	
For Sale Residential Assessed Value (Millions)	\$94.4	\$249.2	\$429.5	\$532.8	\$637.4	\$640.9	\$645.4	\$650.8	\$657.1	\$664.1	\$672.0	\$680.5	\$689.7	\$699.5	\$709.9	\$720.9	\$732.4	

**Table A-11**  
**Property Tax Estimate (Cont.)**

Village 3 North SPA

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	
	(Value)																		
Annual For Sale Product AV (Millions)		\$94.4	\$151.6	\$172.6	\$95.9	\$94.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Annual Income Generating Product AV (Millions)		\$0.0	\$19.3	\$0.0	\$24.5	\$12.2	\$10.1	\$10.1	\$4.2	\$4.2	\$4.2	\$4.2	\$10.1	\$10.1	\$10.1	\$5.4	\$0.0	\$0.0	
<b>Appreciation Factor:</b>	<b>Annual Rate</b>	<b>Yr 1</b>	<b>Yr 2</b>	<b>Yr 3</b>	<b>Yr 4</b>	<b>Yr 5</b>	<b>Yr 6</b>	<b>Yr 7</b>	<b>Yr 8</b>	<b>Yr 9</b>	<b>Yr 10</b>	<b>Yr 11</b>	<b>Yr 12</b>	<b>Yr 13</b>	<b>Yr 14</b>	<b>Yr 15</b>	<b>Yr 16</b>	<b>Yr 17</b>	
Real Appreciation Rate	2.00%	100%	102%	104%	106%	108%	110%	113%	115%	117%	120%	122%	124%	127%	129%	132%	135%	137%	
Proposition 13 AV Limitation less Inflation of 2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Residential Annual Turnover Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	
Commercial Turnover Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	
<b>Commercial and Rental Residential Product</b>																			
Year Property First Sold:																			
	Yr 1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
	Yr 2		\$19.71	\$19.7	\$19.8	\$19.8	\$19.9	\$20.0	\$20.1	\$20.2	\$20.4	\$20.5	\$20.7	\$20.9	\$21.1	\$21.3	\$21.6	\$21.8	
	Yr 3			\$0.00	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
	Yr 4				\$26.04	\$26.1	\$26.1	\$26.2	\$26.3	\$26.4	\$26.6	\$26.7	\$26.9	\$27.1	\$27.4	\$27.6	\$27.9	\$28.2	
	Yr 5					\$13.21	\$13.2	\$13.2	\$13.3	\$13.3	\$13.4	\$13.5	\$13.6	\$13.7	\$13.8	\$13.9	\$14.0	\$14.1	
	Yr 6						\$11.12	\$11.1	\$11.1	\$11.2	\$11.2	\$11.3	\$11.3	\$11.4	\$11.5	\$11.6	\$11.7	\$11.8	
	Yr 7							\$11.34	\$11.3	\$11.4	\$11.4	\$11.4	\$11.5	\$11.6	\$11.6	\$11.7	\$11.8	\$11.9	
	Yr 8								\$4.86	\$4.9	\$4.9	\$4.9	\$4.9	\$4.9	\$5.0	\$5.0	\$5.0	\$5.1	
	Yr 9									\$4.96	\$5.0	\$4.97	\$4.99	\$5.00	\$5.03	\$5.06	\$5.09	\$5.12	
	Yr 10										\$5.06	\$5.1	\$5.1	\$5.1	\$5.1	\$5.1	\$5.2	\$5.2	
	Yr 11											\$5.16	\$5.2	\$5.2	\$5.2	\$5.2	\$5.2	\$5.3	
	Yr 12												\$12.52	\$12.53	\$12.55	\$12.59	\$12.64	\$12.70	
	Yr 13													\$12.77	\$12.78	\$12.81	\$12.84	\$12.89	
	Yr 14														\$13.02	\$13.04	\$13.06	\$13.10	
	Yr 15															\$7.07	\$7.08	\$7.09	
	Yr 16																\$0.00	\$0.00	
	Yr 17																	\$0.00	
Commercial and Rental Residential Assessed Value (Millions)		\$0.0	\$19.7	\$19.7	\$45.8	\$59.1	\$70.3	\$81.9	\$87.0	\$92.3	\$97.8	\$103.5	\$116.7	\$130.1	\$144.0	\$152.0	\$153.0	\$154.2	
Total Assessed Value (Residential and Commercial) (Millions)		\$94.4	\$268.9	\$449.2	\$578.6	\$696.5	\$711.2	\$727.3	\$737.8	\$749.4	\$762.0	\$775.5	\$797.1	\$819.8	\$843.5	\$861.9	\$873.9	\$886.6	
Less Base Assessed Value		0.0	(4.6)	(9.2)	(13.2)	(17.5)	(18.1)	(19.8)	(20.2)	(20.6)	(21.1)	(21.5)	(22.0)	(22.6)	(23.2)	(23.7)	(23.7)	(23.7)	
Incremental AV (Residential and Commercial) (Millions)		\$94.4	\$264.3	\$440.0	\$565.4	\$679.0	\$693.2	\$707.5	\$717.6	\$728.8	\$740.9	\$754.0	\$775.1	\$797.2	\$820.3	\$838.2	\$850.2	\$862.9	
<b>Total Incremental Property Taxes Collected<sup>1</sup></b>	<b>1.00%</b>	<b>\$0</b>	<b>\$944,000</b>	<b>\$2,643,118</b>	<b>\$4,400,078</b>	<b>\$5,653,512</b>	<b>\$6,789,755</b>	<b>\$6,931,650</b>	<b>\$7,074,760</b>	<b>\$7,176,105</b>	<b>\$7,287,781</b>	<b>\$7,409,259</b>	<b>\$7,540,074</b>	<b>\$7,750,978</b>	<b>\$7,971,983</b>	<b>\$8,202,885</b>	<b>\$8,381,684</b>	<b>\$8,502,001</b>	
<b>Property Tax Share to the City</b>	<b>10.636%</b>	<b>\$0</b>	<b>\$100,407</b>	<b>\$281,131</b>	<b>\$468,006</b>	<b>\$601,326</b>	<b>\$722,180</b>	<b>\$737,273</b>	<b>\$752,494</b>	<b>\$763,274</b>	<b>\$775,152</b>	<b>\$788,073</b>	<b>\$801,986</b>	<b>\$824,419</b>	<b>\$847,926</b>	<b>\$872,485</b>	<b>\$891,503</b>	<b>\$904,300</b>	

<sup>1</sup>With a year lag to account for property tax receipt to the City.

**Table A-12**  
**Annual Property Transfer Tax Estimate**

Village 3 North SPA

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Annual For Sale Product AV (Millions)		\$94.4	\$151.6	\$172.6	\$95.9	\$94.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Annual Income Generating Product AV (Millions)		\$0.0	\$19.3	\$0.0	\$24.5	\$12.2	\$10.1	\$10.1	\$4.2	\$4.2	\$4.2	\$4.2	\$10.1	\$10.1	\$10.1	\$5.4	\$0.0	\$0.0
Appreciation Factor:	<i>Annual Rate</i>	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17
Real Appreciation Rate	2.00%	100%	102%	104%	106%	108%	110%	113%	115%	117%	120%	122%	124%	127%	129%	132%	135%	137%
Residential Annual Turnover Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Commercial Turnover Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
<b><u>For Sale Residential Product</u></b>																		
Year Property First Sold:																		
	Yr 1	\$51,920	\$5,296	\$5,402	\$5,510	\$5,620	\$5,732	\$5,847	\$5,964	\$6,083	\$6,205	\$6,329	\$6,456	\$6,585	\$6,716	\$6,851	\$6,988	\$7,128
	Yr 2		\$85,049	\$8,675	\$8,848	\$9,025	\$9,206	\$9,390	\$9,578	\$9,769	\$9,965	\$10,164	\$10,367	\$10,575	\$10,786	\$11,002	\$11,222	\$11,446
	Yr 3			\$98,792	\$10,077	\$10,278	\$10,484	\$10,694	\$10,907	\$11,126	\$11,348	\$11,575	\$11,807	\$12,043	\$12,284	\$12,529	\$12,780	\$13,035
	Yr 4				\$55,988	\$5,711	\$5,825	\$5,941	\$6,060	\$6,182	\$6,305	\$6,431	\$6,560	\$6,691	\$6,825	\$6,961	\$7,101	\$7,243
	Yr 5					\$56,200	\$5,732	\$5,847	\$5,964	\$6,083	\$6,205	\$6,329	\$6,456	\$6,585	\$6,716	\$6,851	\$6,988	\$7,128
	Yr 6						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 7							\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 8								\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 9									\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 10										\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 11											\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 12												\$0	\$0	\$0	\$0	\$0	\$0
	Yr 13													\$0	\$0	\$0	\$0	\$0
	Yr 14														\$0	\$0	\$0	\$0
	Yr 15															\$0	\$0	\$0
	Yr 16																\$0	\$0
	Yr 17																	\$0
For Sale Residential Property Transfer Taxes		\$51,920	\$90,345	\$112,869	\$80,423	\$86,834	\$36,980	\$37,719	\$38,474	\$39,243	\$40,028	\$40,828	\$41,645	\$42,478	\$43,328	\$44,194	\$45,078	\$45,979

**Table A-12**  
**Annual Property Transfer Tax Estimate (Cont.)**

Village 3 North SPA

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Annual For Sale Product AV (Millions)		\$94.4	\$151.6	\$172.6	\$95.9	\$94.4	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Annual Income Generating Product AV (Millions)		\$0.0	\$19.3	\$0.0	\$24.5	\$12.2	\$10.1	\$10.1	\$4.2	\$4.2	\$4.2	\$4.2	\$10.1	\$10.1	\$10.1	\$5.4	\$0.0	\$0.0
Appreciation Factor:	<i>Annual Rate</i>	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17
Real Appreciation Rate	2.00%	100%	102%	104%	106%	108%	110%	113%	115%	117%	120%	122%	124%	127%	129%	132%	135%	137%
Residential Annual Turnover Rate	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Commercial Turnover Rate	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
<b>Commercial and Rental Residential Product</b>																		
Year Property First Sold:																		
	Yr 1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 2		\$10,839	\$553	\$564	\$575	\$587	\$598	\$610	\$623	\$635	\$648	\$661	\$674	\$687	\$701	\$715	\$729
	Yr 3			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Yr 4				\$14,320	\$730	\$745	\$760	\$775	\$791	\$806	\$822	\$839	\$856	\$873	\$890	\$908	\$926
	Yr 5					\$7,265	\$371	\$378	\$385	\$393	\$401	\$409	\$417	\$426	\$434	\$443	\$452	\$461
	Yr 6						\$6,113	\$312	\$318	\$324	\$331	\$337	\$344	\$351	\$358	\$365	\$373	\$380
	Yr 7							\$6,236	\$318	\$324	\$331	\$337	\$344	\$351	\$358	\$365	\$373	\$380
	Yr 8								\$2,672	\$136	\$139	\$142	\$145	\$148	\$150	\$153	\$157	\$160
	Yr 9									\$2,726	\$139	\$142	\$145	\$148	\$150	\$153	\$157	\$160
	Yr 10										\$2,780	\$142	\$145	\$148	\$150	\$153	\$157	\$160
	Yr 11											\$2,836	\$145	\$148	\$150	\$153	\$157	\$160
	Yr 12												\$6,885	\$351	\$358	\$365	\$373	\$380
	Yr 13													\$7,022	\$358	\$365	\$373	\$380
	Yr 14														\$7,163	\$365	\$373	\$380
	Yr 15															\$3,888	\$198	\$202
	Yr 16																\$0	\$0
	Yr 17																	\$0
Commercial and Rental Residential Property Transfer Tax		\$0	\$10,839	\$553	\$14,884	\$8,570	\$7,815	\$8,284	\$5,079	\$5,317	\$5,563	\$5,816	\$10,069	\$10,621	\$11,192	\$8,363	\$4,762	\$4,858
<b>Total</b>		<b>\$51,920</b>	<b>\$101,183</b>	<b>\$113,422</b>	<b>\$95,307</b>	<b>\$95,405</b>	<b>\$44,795</b>	<b>\$46,003</b>	<b>\$43,553</b>	<b>\$44,560</b>	<b>\$45,590</b>	<b>\$46,644</b>	<b>\$51,714</b>	<b>\$53,099</b>	<b>\$54,519</b>	<b>\$52,557</b>	<b>\$49,840</b>	<b>\$50,837</b>
Total Annual Property Taxes to the City			\$51,920	\$101,183	\$113,422	\$95,307	\$95,405	\$44,795	\$46,003	\$43,553	\$44,560	\$45,590	\$46,644	\$51,714	\$53,099	\$54,519	\$52,557	\$49,840

**Table A-13**  
**Motor Vehicle License Fee Estimates**

Village 3 North SPA																	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
<b>Motor Vehicle In Lieu Fee (MVLf) Adjustment</b>																	
Base Year (2004) Assessed Valuation of the City (Millions)	\$15,596																
Base Year (2004) Motor Vehicle In Lieu Fee Adjustment (MVLf) (Millions)	\$11.8																
Cumulative AV of New Development (Millions)	\$94.4	\$268.9	\$449.2	\$578.6	\$696.5	\$711.2	\$727.3	\$737.8	\$749.4	\$762.0	\$775.5	\$797.1	\$819.8	\$843.5	\$861.9	\$873.9	\$886.6
AV Adjustment of Base Value (Millions)	\$0.0	(\$4.6)	(\$9.2)	(\$13.2)	(\$17.5)	(\$18.1)	(\$19.8)	(\$20.2)	(\$20.6)	(\$21.1)	(\$21.5)	(\$22.0)	(\$22.6)	(\$23.2)	(\$23.7)	(\$23.7)	(\$23.7)
Adjusted Cumulative AV Development (Millions)	\$94.4	\$264.3	\$440.0	\$565.4	\$679.0	\$693.2	\$707.5	\$717.6	\$728.8	\$740.9	\$754.0	\$775.1	\$797.2	\$820.3	\$838.2	\$850.2	\$862.9
Cumulative Citywide AV Growth (Millions)	\$15,691	\$15,861	\$16,036	\$16,162	\$16,275	\$16,289	\$16,304	\$16,314	\$16,325	\$16,337	\$16,350	\$16,371	\$16,393	\$16,416	\$16,434	\$16,446	\$16,459
Percent Increase in AV	0.61%	1.69%	2.82%	3.62%	4.35%	4.44%	4.54%	4.60%	4.67%	4.75%	4.83%	4.97%	5.11%	5.26%	5.37%	5.45%	5.53%
Cumulative MVLf generated by the Project	\$71,616	\$200,519	\$333,810	\$428,902	\$515,102	\$525,867	\$536,724	\$544,413	\$552,885	\$562,101	\$572,025	\$588,025	\$604,792	\$622,309	\$635,874	\$645,001	\$654,631
<b>Total Annual MVLf Fees</b>	<b>\$71,616</b>	<b>\$200,519</b>	<b>\$333,810</b>	<b>\$428,902</b>	<b>\$515,102</b>	<b>\$525,867</b>	<b>\$536,724</b>	<b>\$544,413</b>	<b>\$552,885</b>	<b>\$562,101</b>	<b>\$572,025</b>	<b>\$588,025</b>	<b>\$604,792</b>	<b>\$622,309</b>	<b>\$635,874</b>	<b>\$645,001</b>	<b>\$654,631</b>

<sup>1</sup> As presented in the SPA Fiscal Impact Framework

Source: City of Chula Vista and HR&A

**Table A-14**  
**Estimated Onsite Retail Sales Tax**

Average Est. HH Income <sup>1</sup>	
Single Family Units	\$109,000
Multi Family Units	
MF Detached	\$75,000
Rental Townhomes	\$77,400
MF Mixed Use	\$77,400

Village 3 North SPA

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
<b>Households</b>																	
Single Family Units	200	401	602	802	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002	1,002
Multi Family Units																	
MF Detached	0	186	441	446	446	446	446	446	446	446	446	446	446	446	446	446	446
Rental Townhomes	0	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
MF Mixed Use	0	0	0	80	80	80	80	80	80	80	80	80	80	80	80	80	80
<b>Total Units</b>	200	656	1,112	1,397	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597
<b>Employees</b>	0	0	0	25	189	328	467	519	572	624	676	815	954	1,093	1,159	1,159	1,159
<b>Aggregate HH Income</b>	\$21,800,000	\$62,999,600	\$104,033,600	\$132,400,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600
<b>Average Annual Income/HH</b>	\$109,000	\$96,036	\$93,555	\$94,775	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556
<b>Countywide Income/HH<sup>2</sup></b>	\$83,935																
<b>Countywide Retail Exp/HH<sup>3</sup></b>	\$36,583																
<b>Retail Expenditure/HH Adj. Factor for SPA</b>	130%	114%	111%	113%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%
<b>SPA Avg. Retail Expenditure/HH</b>	\$47,508	\$41,858	\$40,776	\$41,308	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084
<b>Gross Retail Sales of Village 3 Residents</b>																	
Neighborhood Center	33%	\$3,135,524	\$9,061,320	\$14,963,298	\$19,043,363	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888
Community Center	20%	1,900,318	5,491,709	9,068,665	11,541,432	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750
Regional Center	4%	380,064	1,098,342	1,813,733	2,308,286	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350
Super Regional Center	7%	665,111	1,922,098	3,174,033	4,039,501	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613
Other Centers	36%	3,420,572	9,885,077	16,323,598	20,774,578	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150
<b>Onsite Capture</b>																	
Neighborhood Center	60%	\$1,881,315	\$5,436,792	\$8,977,979	\$11,426,018	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333	\$13,307,333
Community Center	20%	\$380,064	\$1,098,342	\$1,813,733	\$2,308,286	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350
Regional Center	0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Super Regional Center	0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Centers	10%	\$342,057	\$988,508	\$1,632,360	\$2,077,458	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515	\$2,419,515
<b>Gross Retail Sales from SPA Employees</b>																	
Annual Expenditure/Employee	\$1,175																
<b>Onsite Capture</b>																	
Neighborhood Center	30%	\$0	\$0	\$0	\$8,813	\$66,575	\$115,525	\$164,476	\$182,966	\$201,456	\$219,947	\$238,437	\$287,387	\$336,337	\$385,288	\$408,709	\$408,709
Community Center	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Regional Center	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Super Regional Center	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Centers	10%	0	0	0	2,938	22,192	38,508	54,825	60,989	67,152	73,316	79,479	95,796	112,112	128,429	136,236	136,236
<b>Total Taxable Retail Sales</b>	% Taxable																
Neighborhood Center	64%	\$1,204,041	\$3,479,547	\$5,745,906	\$7,318,291	\$8,559,301	\$8,590,629	\$8,621,957	\$8,633,791	\$8,645,625	\$8,657,459	\$8,669,293	\$8,700,621	\$8,731,949	\$8,763,277	\$8,778,266	\$8,778,266
Community Center	77%	292,649	845,723	1,396,574	1,777,381	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030	2,070,030
Regional Center	97%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Super Regional Center	100%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Centers	97%	331,795	958,852	1,583,389	2,017,983	2,368,456	2,384,283	2,400,110	2,406,089	2,412,067	2,418,046	2,424,024	2,439,851	2,455,679	2,471,506	2,479,079	2,479,079
<b>Total Taxable Retail Sales</b>		\$1,828,486	\$5,284,123	\$8,725,870	\$11,113,655	\$12,997,786	\$13,044,941	\$13,092,097	\$13,109,909	\$13,127,722	\$13,145,534	\$13,163,346	\$13,210,502	\$13,257,657	\$13,304,812	\$13,327,375	\$13,327,375
<b>Annual Sales Taxes to the City @</b>	1%	\$18,285	\$52,841	\$87,259	\$111,137	\$129,978	\$130,449	\$130,921	\$131,099	\$131,277	\$131,455	\$131,633	\$132,105	\$132,577	\$133,048	\$133,274	\$133,274

<sup>1</sup> Derived based on estimate of mortgage payment as 25% of income and 20 percent down. Rental incomes are estimated assuming 30 percent of income is made for housing.

<sup>2</sup> American Community Survey 2009

<sup>3</sup> Board of Equalization 2009 Annual Data per county capita

Source: City of Chula Vista and HR&A

**Table A-15  
Estimated Offsite Retail Sales Tax**

Village 3 North SPA																	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Average Est. HH Income <sup>1</sup>	\$109,000																
Single Family Units	\$109,000																
Multi Family Units																	
MF Detached	\$75,000																
Rental Apartments	\$77,400																
MF Mixed Use	\$77,400																
<b>Households</b>																	
Multi Family Units																	
MF Attached	0	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Total Units	200	656	1,112	1,397	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597
Employees	0	0	0	25	189	328	467	519	572	624	676	815	954	1,093	1,159	1,159	1,159
Aggregate HH Income	\$21,800,000	\$62,999,600	\$104,033,600	\$132,400,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600	\$154,200,600
Average Annual Income/HH	\$109,000	\$96,036	\$93,555	\$94,775	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556	\$96,556
Countywide Income/HH <sup>2</sup>	\$83,935																
Countywide Retail Exp/HH <sup>3</sup>	\$36,583																
Retail Expenditure/HH Adj. Factor for SPA	130%	114%	111%	113%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%	115%
Project Avg. Retail Expenditure/HH	\$47,508	\$41,858	\$40,776	\$41,308	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084	\$42,084
<b>Gross Retail Sales of Village 3 Residents</b>																	
Neighborhood Center	33%	\$3,135,524	\$9,061,320	\$14,963,298	\$19,043,363	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888	\$22,178,888
Community Center	20%	1,900,318	5,491,709	9,068,665	11,541,432	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750	13,441,750
Regional Center	4%	380,064	1,098,342	1,813,733	2,308,286	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350	2,688,350
Super Regional Center	7%	665,111	1,922,098	3,174,033	4,039,501	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613	4,704,613
Other Centers	36%	3,420,572	9,885,077	16,323,598	20,774,578	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150	24,195,150
<b>Off Site Share</b>																	
Neighborhood Center	40%	\$1,254,210	\$3,624,528	\$5,985,319	\$7,617,345	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555	\$8,871,555
Community Center	80%	\$1,520,254	\$4,393,367	\$7,254,932	\$9,233,146	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400	\$10,753,400
Regional Center	100%	\$380,064	\$1,098,342	\$1,813,733	\$2,308,286	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350	\$2,688,350
Super Regional Center	100%	\$665,111	\$1,922,098	\$3,174,033	\$4,039,501	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613	\$4,704,613
Other Centers	90%	\$3,078,515	\$8,896,569	\$14,691,238	\$18,697,120	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635	\$21,775,635
<b>Chula Vista Capture</b>																	
Neighborhood Center	85%	\$2,665,196	\$3,080,849	\$5,087,521	\$6,474,743	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822	\$7,540,822
Community Center	85%	\$1,615,270	\$3,734,362	\$6,166,693	\$7,848,174	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390	\$9,140,390
Regional Center	70%	\$266,044	\$768,839	\$1,269,613	\$1,615,801	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845	\$1,881,845
Super Regional Center	55%	\$365,811	\$1,057,154	\$1,745,718	\$2,221,726	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537
Other Centers	40%	\$1,368,229	\$3,558,628	\$5,876,495	\$7,478,848	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254	\$8,710,254
<b>Gross Retail Sales from SPA Employees</b>																	
Annual Expenditure/Employee	\$1,175																
<b>Offsite Spending</b>																	
Neighborhood Center	25%	\$0	\$0	\$0	\$7,344	\$55,479	\$96,271	\$137,063	\$152,472	\$167,880	\$183,289	\$198,698	\$239,489	\$280,281	\$321,073	\$340,591	\$340,591
Community Center	20%	0	0	0	5,875	44,383	77,017	109,650	121,977	134,304	146,631	158,958	191,592	224,225	256,858	272,473	272,473
Regional Center	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Super Regional Center	0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Centers	15%	0	0	0	4,406	33,288	57,763	82,238	91,483	100,728	109,973	119,219	143,694	168,169	192,644	204,354	204,354
<b>Chula Vista Capture</b>																	
Neighborhood Center	80%	\$0	\$0	\$0	\$5,875	\$44,383	\$77,017	\$109,650	\$121,977	\$134,304	\$146,631	\$158,958	\$191,592	\$224,225	\$256,858	\$272,473	\$272,473
Community Center	85%	\$0	\$0	\$0	\$4,994	\$37,726	\$65,464	\$93,203	\$103,681	\$114,159	\$124,636	\$135,114	\$162,853	\$190,591	\$218,330	\$231,602	\$231,602
Regional Center	70%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Super Regional Center	55%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other Centers	40%	\$0	\$0	\$0	\$1,763	\$13,315	\$23,105	\$32,895	\$36,593	\$40,291	\$43,989	\$47,687	\$57,477	\$67,267	\$77,058	\$81,742	\$81,742
<b>Taxable Retail Sales</b>																	
Neighborhood Center	64%	\$1,705,725	\$1,971,743	\$3,256,014	\$4,147,596	\$4,854,531	\$4,875,417	\$4,896,302	\$4,904,191	\$4,912,081	\$4,919,970	\$4,927,859	\$4,948,745	\$4,969,630	\$4,990,515	\$5,000,508	\$5,000,508
Community Center	77%	\$1,243,758	\$2,875,459	\$4,748,353	\$6,046,939	\$7,067,149	\$7,088,508	\$7,109,867	\$7,117,934	\$7,126,002	\$7,134,070	\$7,142,138	\$7,163,497	\$7,184,856	\$7,206,214	\$7,216,434	\$7,216,434
Regional Center	97%	\$258,063	\$745,774	\$1,231,525	\$1,567,326	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390	\$1,825,390
Super Regional Center	100%	\$365,811	\$1,057,154	\$1,745,718	\$2,221,726	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537	\$2,587,537
Other Centers	97%	\$1,327,182	\$3,451,869	\$5,700,200	\$7,256,192	\$8,461,862	\$8,471,358	\$8,480,855	\$8,484,442	\$8,488,029	\$8,491,616	\$8,495,203	\$8,504,700	\$8,514,196	\$8,523,692	\$8,528,236	\$8,528,236
Total Taxable Retail Sales		\$4,900,540	\$10,101,999	\$16,681,810	\$21,239,779	\$24,796,469	\$24,848,210	\$24,899,950	\$24,919,494	\$24,939,039	\$24,958,583	\$24,978,127	\$25,029,868	\$25,081,608	\$25,133,348	\$25,158,104	\$25,158,104
Annual Sales Taxes to the City @	1%	\$49,005	\$101,020	\$166,818	\$212,398	\$247,965	\$248,482	\$248,999	\$249,195	\$249,390	\$249,586	\$249,781	\$250,299	\$250,816	\$251,333	\$251,581	\$251,581

<sup>1</sup>Derived based on an estimate of mortgage payment as 25% of income and 20 percent down. Rental incomes are estimated assuming 30 percent of income is made for housing.

<sup>2</sup>American Community Survey 2009

<sup>3</sup>Board of Equalization 2009 Annual Data per county capita

**Table A-16  
Village 3 - Revenue Summary (2009 \$)**

Village 3 North SPA

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
<b>Revenue Drivers</b>																	
Population(Persons)	648	2,125	3,603	4,526	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174
Private Employment (Employees)	0	0	0	25	189	328	467	519	572	624	676	815	954	1,093	1,159	1,159	1,159
Dwelling Units	200	656	1,112	1,397	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597
Retail Commercial (SF)	0	0	0	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Commercial (Acres)	0.0	0.0	0.0	0.0	1.0	2.0	3.1	3.1	3.1	3.1	4.1	5.1	6.1	6.1	6.1	6.1	6.1
Industrial Land (Acres)	0.0	0.0	0.0	0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.8	33.8	33.8
Residential Land (Acres)	23.0	51.6	80.3	105.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1	128.1
<b>Annual Revenues</b>																	
<b>Revenue Adjustment Factor</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>	<b>115%</b>
<b>Revenue Factors</b>																	
Population(Persons)	\$3.86	\$2,875	\$9,431	\$15,987	\$20,085	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960	\$22,960
Private Employment (Employees)	\$19.45	\$0	\$0	\$0	\$559	\$4,222	\$7,326	\$10,431	\$11,603	\$12,776	\$13,948	\$15,121	\$18,225	\$21,330	\$24,434	\$25,919	\$25,919
Dwelling Units	\$3.60	\$827	\$2,712	\$4,597	\$5,775	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602	\$6,602
Retail Commercial (SF)	\$0.07	\$0	\$0	\$0	\$791	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582	\$1,582
Commercial (Acres)	\$839.44	\$0	\$0	\$0	\$0	\$981	\$1,962	\$2,942	\$2,942	\$2,942	\$2,942	\$3,923	\$4,904	\$5,885	\$5,885	\$5,885	\$5,885
Industrial (Acres)	\$759.37	\$0	\$0	\$0	\$0	\$2,618	\$5,236	\$7,854	\$10,472	\$13,090	\$15,708	\$18,326	\$20,944	\$23,562	\$26,180	\$29,496	\$29,496
Residential Land (Acres)	\$1,600.36	\$42,289	\$94,956	\$147,624	\$193,302	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590	\$235,590
Property Taxes	\$0	\$100,407	\$281,131	\$468,006	\$601,326	\$722,180	\$737,273	\$752,494	\$763,274	\$775,152	\$788,073	\$801,986	\$824,419	\$847,926	\$872,485	\$891,503	\$904,300
Property Transfer Taxes	\$0	\$51,920	\$101,183	\$113,422	\$95,307	\$95,405	\$44,795	\$46,003	\$43,553	\$44,560	\$45,590	\$46,644	\$51,714	\$53,099	\$54,519	\$52,557	\$49,840
MVLF Revenues	\$71,616	\$200,519	\$333,810	\$428,902	\$515,102	\$525,867	\$536,724	\$544,413	\$552,885	\$562,101	\$572,025	\$588,025	\$604,792	\$622,309	\$635,874	\$645,001	\$654,631
Sales and Use Tax	\$67,290	\$153,861	\$254,077	\$323,534	\$377,943	\$378,932	\$379,920	\$380,294	\$380,668	\$381,041	\$381,415	\$382,404	\$383,393	\$384,382	\$384,855	\$384,855	\$384,855
<b>Total Annual Revenues</b>	<b>\$184,897</b>	<b>\$613,807</b>	<b>\$1,138,409</b>	<b>\$1,554,376</b>	<b>\$1,864,233</b>	<b>\$2,003,642</b>	<b>\$1,986,673</b>	<b>\$2,014,955</b>	<b>\$2,035,921</b>	<b>\$2,062,187</b>	<b>\$2,090,226</b>	<b>\$2,128,886</b>	<b>\$2,180,846</b>	<b>\$2,230,948</b>	<b>\$2,275,766</b>	<b>\$2,301,950</b>	<b>\$2,321,661</b>

Source: HR&A

**Table A-17**  
**Village 3 - Expenditure Summary (2009 \$)**

Village 3 North SPA

Expense Drivers	Unit Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17
Dwelling Units		200	656	1,112	1,397	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597	1,597
Population		648	2,125	3,603	4,526	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174	5,174
Retail (SF)		0	0	0	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Commercial Acres		0.0	0.0	0.0	0.0	1.0	2.0	3.1	3.1	3.1	3.1	3.1	4.1	5.1	6.1	6.1	6.1	6.1
Industrial Acres		0.0	0.0	0.0	0.0	3.0	6.0	9.0	12.0	15.0	18.0	21.0	24.0	27.0	30.0	33.8	33.8	33.8
Park Acres		2.7	6.1	9.5	12.5	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2	15.2
Open Space and ROW Acres		10.1	22.7	35.2	46.1	57.8	59.3	64.0	65.1	66.3	67.4	68.6	70.1	71.6	73.2	74.6	74.6	74.6
Public Use Acres (School and CPF)		0.8	1.7	2.6	3.4	4.2	4.2	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Expenditure Adjustment Factor		117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%	117%
Retail (SF)	\$1.36	\$0	\$0	\$0	\$15,864	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729	\$31,729
Retail (Acres)	\$16,527.08	\$0	\$0	\$0	\$0	\$3,934	\$7,869	\$11,803	\$11,803	\$11,803	\$11,803	\$11,803	\$15,737	\$19,672	\$23,606	\$23,606	\$23,606	\$23,606
Office (Acres)	\$13,661.45	\$0	\$0	\$0	\$0	\$13,009	\$26,017	\$39,026	\$39,026	\$39,026	\$39,026	\$39,026	\$52,035	\$65,044	\$78,052	\$78,052	\$78,052	\$78,052
Industrial (Acres)	\$2,177.48	\$0	\$0	\$0	\$0	\$7,648	\$15,296	\$22,944	\$30,592	\$38,240	\$45,888	\$53,536	\$61,184	\$68,832	\$76,479	\$84,167	\$86,167	\$86,167
Park (Acres)	\$2,448.06	\$7,840	\$17,604	\$27,368	\$35,837	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677	\$43,677
Population (Persons)	\$76.53	\$58,058	\$190,431	\$322,803	\$405,536	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595	\$463,595
Open Space and ROW (Acres)	\$160.46	\$1,896	\$4,258	\$6,619	\$8,667	\$10,851	\$11,139	\$12,020	\$12,235	\$12,450	\$12,665	\$12,880	\$13,167	\$13,455	\$13,742	\$14,014	\$14,014	\$14,014
Public Use (Acres)	\$2,710.85	\$2,393	\$5,373	\$8,353	\$10,937	\$13,330	\$13,330	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672	\$39,672
Expenditures Allocated to DUs (excluding Public Safety)	\$119.40	\$27,959	\$91,705	\$155,452	\$195,293	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252	\$223,252
Public Safety Costs Allocated to DUs	\$118,093	\$387,344	\$656,595	\$824,878	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970	\$942,970
<b>Total Est. Annual Expenditures (2009 Dollars)</b>		<b>\$216,239</b>	<b>\$696,715</b>	<b>\$1,177,191</b>	<b>\$1,497,013</b>	<b>\$1,753,994</b>	<b>\$1,778,873</b>	<b>\$1,830,688</b>	<b>\$1,838,551</b>	<b>\$1,846,414</b>	<b>\$1,854,276</b>	<b>\$1,862,139</b>	<b>\$1,887,018</b>	<b>\$1,911,896</b>	<b>\$1,936,775</b>	<b>\$1,946,734</b>	<b>\$1,946,734</b>	<b>\$1,946,734</b>

Source: HR&A

