OTAY RANCH
VILLAGE 7 SPA PLAN

PUBLIC FACILITIES FINANCE PLAN

Approved by:
Chula Vista City Council
October 12, 2005

Resolution No.
2004-329

Prepared by:
burkett & wong Engineers

II.5.1 EXECUTIVE SUMMARY

OVERVIEW

This Public Facility Finance Plan (PFFP) addresses the public facility needs associated with the Otay Ranch Village 7 Sectional Planning Area (SPA) Plan. The developer proposed project as described in the SPA Plan is 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 Otay Ranch Village 7 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, to ensure that the development of the project will not adversely impact the City's Quality of Life Standards. This PFFP meets the policy objectives of the Otay Ranch GDP.

This PFFP is based upon the phasing and project information that has been presented in the draft Otay Ranch Village 7 SPA Plan dated July 31, 2003, the Otay Ranch GDP, as amended. 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 2010. Further, the PFFP uses the phasing as proposed by the project to determine the impacts associated with it.

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 the continued compliance with the Growth Management Program and Quality of Life Standards. The PFFP does not propose different development phasing from that proposed by the project or alternative plans, 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 Standards. Subsequent changes to the phasing shall require an amendment to this PFFP.

Typically, as an applicant receives each succeeding development approval, the applicant must perform the required steps that will insure 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 Thresholds.
- Facilities sited and zoning identified.

Tentative Map:

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

Final Map:

- Tentative Map conditions performed.
- Lots created.

Building Permit:

- Impact fees paid as required.

The critical link between the thresholds 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 as a condition of approval of all SPAs. 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 FOR THE VILLAGE 7 PFFP

1. All development within the boundaries of the PFFP for the Otay Ranch Village 7 SPA 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 Otay Ranch Village 7 SPA 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 7 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 the Otay Ranch Village 7 SPA 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 City Council approved Otay Ranch Village 7 SPA Plan.

7. The plan analysis is based upon the phasing presented in this document. Any changes to phasing shall require an amendment to the PFFP.

B. PUBLIC FACILITY COST AND FEE SUMMARY OTAY RANCH VILLAGE 7 SPA

The following tables identify and summarize the various facility costs associated with development of the Otay Ranch Village 7 SPA. The facilities and their cost 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 Traffic Impact Analysis by Linscott, Law & Greenspan (LL&G), dated May 20, 2004, has identified several projects that will be required as the result of the development of the Otay Ranch Village 7 SPA. The estimated cost of street improvements is identified in Table C.12. The improvement projects listed include both offsite and onsite improvements. Most of the 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.

TDIF Fees, Interim SR125 facilities and traffic signal fees generated by the Otay Ranch Village 7 SPA and alternatives are identified on Table A.1. Funding for street improvements may be accomplished in one or more possible funding alternatives such as:

- Payment of TDIF fees.
- Construction of improvements by developer with credit toward DIF fees on building permits.
- Financing through assessment districts or Community Facility Districts.
- Expenditure of available DIF account funds.
- Construction of improvements by other developers.
- Federal Funds.

Some off-site sewer, drainage and water facilities may be the responsibility of the developer if the facility is needed to support the proposed development.

The Otay Ranch Village 7 SPA will trigger development impact fees for parks and libraries. The Otay Ranch Village 7 SPA is within Mello-Roos Community Facilities District No. 11. All properties, including non-residential, are assessed a special tax to fully mitigate impacts on school facilities caused by residential development.

Police, fire and emergency medical services, 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 at building permit issuance. These fee revenues for the Otay Ranch Village 7 SPA Plan is identified on Table A.1.

Altogether, the City's development impact fees by phase and facility for the Otay Ranch Village 7 SPA are identified on the following Table A.1.

Table A.1[1]
Otay Ranch Village SPA 7 Project
Summary of DIF Fees by Phase & Facility

Facility	White	Blue	Red	Green	Totals
Traffic (1)	$141,600	$6,661,820	$3,506,754	$327,970	$10,638,144
Sewer	$69,708	$541,912	$262,912	$30,352	$904,884
Drainage (2)	N/A	N/A	N/A		N/A
Water (2)	N/A	N/A	N/A		N/A
Police	$0	$811,304	$301,500	$28,140	$1,140,944
Fire/EMS	$0	$356,404	$168,750	$15,750	$540,904
Schools (3)	N/A	N/A	N/A		N/A
Library	$0	$582,650	$282,375	$26,355	$891,380
Parks (4)	$0	$5,727,038	$3,046,125	$284,305	$9,057,468
Recreation	$0	$718,742	$404,625	$37,765	$1,161,132
Civic Center	$0	$814,042	$408,375	$38,115	$1,260,532
Corp. Yard	$0	$455,732	$264,750	$24,710	$745,192
Other Facilities	$0	$124,982	$62,625	$5,845	$193,452
Total	**$211,308**	**$16,794,626**	**$8,708,791**	**$819,307**	**$26,534,032**

Notes:
(1) Includes TDIF, Interim SR-125 & Traffic Signal Fees.
(2) No city imposed DIF program in place for this facility.
(3) No city imposed DIF program, however, all properties, including non-residential, are assessed a special tax to fully mitigate impacts on school facilities caused by residential development.
(4) See the City of Chula Vista's Park Land Dedication Ordinance.

Please reference Exhibit 4, Phasing Plan.

[1] The fees provided in this table are estimates only and subject to change. Fees are subject to change as the ordinance is amended by the City Council from time to time.

Table A.2 Otay Ranch Village 7 Timing and Funding Source by Facility		
Facility	**Funding Source**	**Project Timing**
Traffic		
1. Otay Ranch Village 7 TDIF	Pay TDIF	Building Permit
2. No Specific Facility	Pay Interim SR-125 DIF	Building Permit
3. No Specific Facility	Pay Traffic Signal Fee	Building Permit
TDIF Streets: **La Media Road** From Birch Road to Street C	Developer funded w/ TDIF credits	Prior to first Final Map
Rock Mountain Road[2] From Magdalena to SR-125	Developer funded w/ TDIF credits	Prior to first Final Map
Onsite non-TDIF public streets **Magdalena Avenue**[3] From Birch Road to Rock Mtn.	Developer Exaction	Prior to first Final Map
Street C From La Media to Magdalena Ave.	Developer Exaction	Prior to first Final Map
Sewer	Developer Build Pay City Fees	Concurrent w/ Phasing Building Permit
Drainage	Developer Build	Per Ordinance
Water	Pay OWD Capacity Fees	Pay @ purchase of Water Meters
Police	Pay PFDIF	Building Permit
Fire/EMS	Pay PFDIF	Building Permit
Schools	SUHSD Mello Roos District CVESD Mello Roos District	Building Permit
Libraries		
Parks Neighborhood Park Community Park	 PAD Credit/Fees PAD Fees	 Building Permit Building Permit
Recreation	Pay PFDIF	Building Permit
Civic Center	Pay PFDIF	Building Permit
Corp. Yard	Pay PFDIF	Building Permit
Other Public Facilities	Pay PFDIF	Building Permit

[2] If the Village 7 High School project is approved by the State of California and grading permit is issued for the high school site, or the high school is under construction, the half-width right of way for Rock Mountain Road along the frontage of the High School site shall be dedicated prior to the approval of the first final map.

[3] If the Village 7 High School project is approved by the State of California and grading permit is issued for the high school site, or the high school is under construction, the full-width of Magdalena Avenue along the frontage of the High School site shall be dedicated prior to the approval of the first final map.

II.5.2 INTRODUCTION

II.5.2.1 Overview

The City of Chula Vista has looked comprehensively at issues dealing with development and the additional impacts it places on public facilities and services. The approval of the Threshold Ordinance and the General Plan update 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 a specific Growth Management Element, which set the stage for the creation of the City's Growth Management Program.

The Chula Vista City Council adopted the Growth Management Program and Implementing 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.5.2.2 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.5.2.3 Growth Management Threshold Standards

City Council Resolution No. 13346 identified eleven 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 eleven 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 two new facilities were added to the list of facilities to be analyzed in the PFFP:

- Civic Facilities
- Corporation Yard

Threshold standards are used to identify when new or upgraded public facilities are needed to mitigate the impacts of new development. Development approvals will not be made unless compliance with these standards can be met. These threshold standards have been prepared to guarantee that public facilities or infrastructure improvements will keep pace with the demands of growth.

II.5.2.4 The Otay Ranch Village 7 SPA Project

The Otay Ranch lies within the approximately 37,585-acre Eastern Territories Planning Area of the City of Chula Vista. Interstate 805 bounds this area on the west, San Miguel Mountain and State Route 54 on the north, the Otay Reservoirs and the Jamul foothills on the east, and the Otay River Valley on the south. The Otay Ranch Village 7 SPA project area is located in the western portion of the Otay Ranch GDP.

The Otay Ranch Village 7 area is under the ownership of several parties, as shown by Exhibit 5. McMillin Otay Ranch, LLC and Otay Project LP are the applicants for the proposed project and their ownerships comprise the majority of Village 7. The Otay Land Company, the Stephen & Mary Birch Foundation (S&MBF), and the FAA also own portions of Village 7. The Village 7 SPA Plan including this PFFP address the McMillin Otay Ranch, LLC and Otay Project LP ownerships.

The proposed Otay Ranch Village 7 SPA Plan project covers that portion of Village 7 under the ownerships of McMillin Otay Ranch, LLC and Otay Project LP. The Village 7 SPA Plan project site comprises approximately 276.9 acres of the 424.4-acre Village 7. The proposed SPA Plan would result in development of residential, community facilities, parks and open space uses, as well as a circulation, trail and infrastructure network to serve these uses. Additionally, the project proposes an elementary school site and a high school site on the McMillin Otay Ranch, LLC property. McMillin Otay Ranch, LLC and the Otay Project LP, the project applicants for development of their ownerships within Village 7 (see Exhibit 3), plan to submit Tentative Maps. This PFFP provides an evaluation of the Village 7 SPA Plan Public Facility Thresholds for the McMillin Otay Ranch, LLC and the Otay Project LP ownerships.

The Village 7 SPA Plan addresses development of a portion of Village 7 as allowed by the Otay Ranch GDP and Section 19.48.020 of the Chula Vista Municipal Code. Development of other ownerships within Village 7 (i.e., the lands owned by Otay Land Company, the Stephen and Mary Birch Foundation, and the Federal Aviation Administration (FAA)) are not covered by the Village 7 SPA Plan including this PFFP. Development of these areas would require an amendment to the Village 7 SPA Plan and this PFFP.

The McMillin Otay Ranch, LLC property comprises approximately 180.2 acres in the eastern portion of the project site. It is bounded by Birch Road to the north, future SR 125 to the east, the S&MBF property to the south, and the Otay Project LP and FAA properties to the west. The upper reach of Wolf Canyon runs east west through the middle of this ownership.

The Otay Project LP property comprises 93.3 acres in the western portion of the project site. Birch Road surrounds it to the north, the McMillin Otay Ranch, LLC property to the east, the Otay Land Company property to the south, and future La Media Road to the west. The 51.9-acre FAA property (know as the VORTAC property) is located within the southern portion of this ownership, creating an irregular-shaped parcel. The upper reach of Wolf Canyon, which runs in an east-west direction, also bisects this site. Similar to the McMillin Otay Ranch, LLC parcel, this ownership is characterized by rolling hills and has historically been dry farmed.

Surrounding the project site are other villages of the Otay Ranch GDP including Villages 2, 3 and 4 to the west, and the Eastern Urban Center (EUC) to the east. The Village 6 project, which is currently under construction, is located to the north of the project. A SPA Plan for Villages 2, 3, and 4 is currently being processed at the city. The EUC is designated in the Otay Ranch GPD for development with high density residential and commercial land uses. In addition, SR 125, an Expressway that stretches from La Mesa in the north to Otay Mesa in the south, is approved adjacent to the eastern side of the project site. SR 125 is currently under construction and is expected to be complete in late 2006.

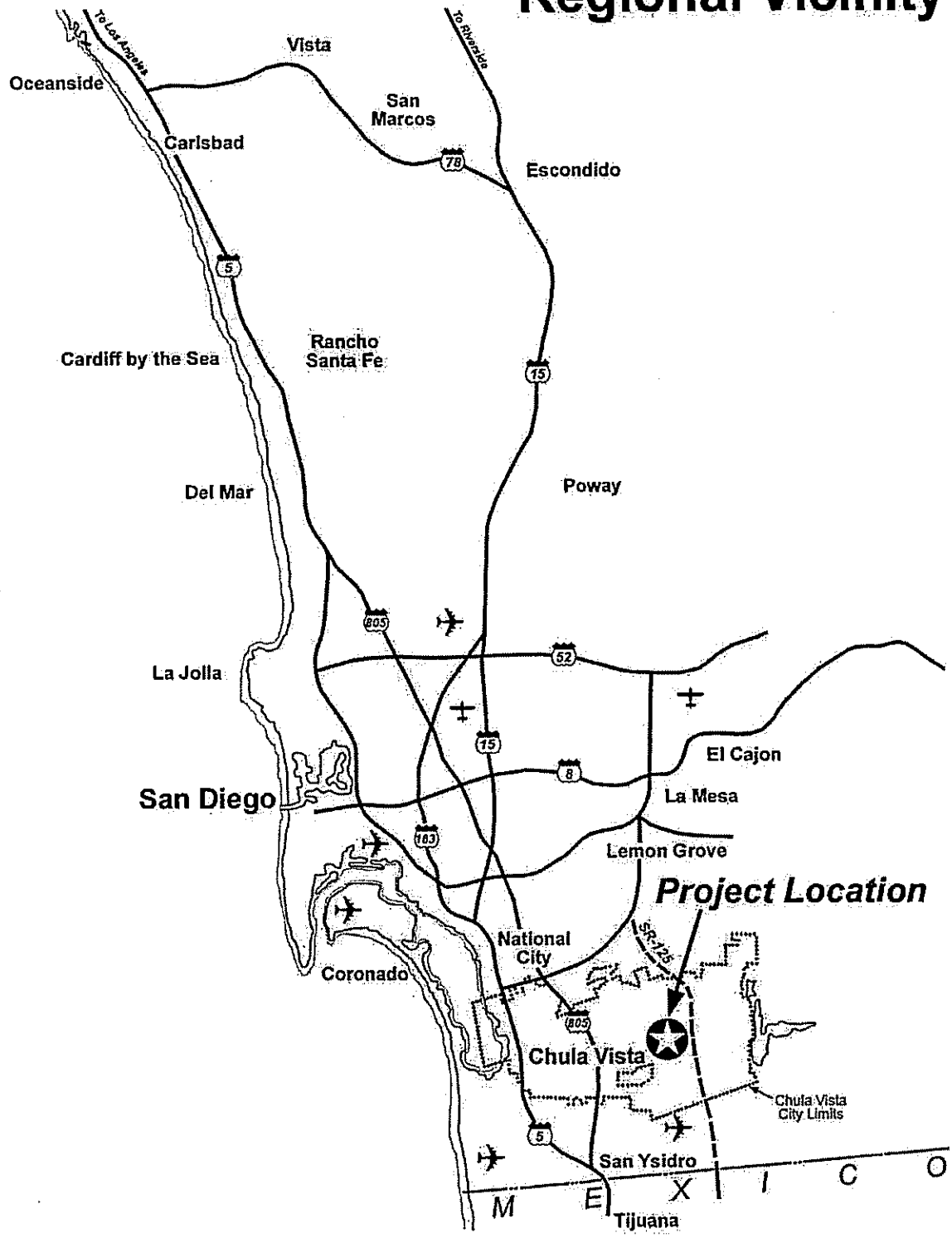
II.5.2.5 Public Facilities Finance Plan Boundaries

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 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:

1. Service areas, drainage, sewer basins, and pressure zones that serve the Project;
2. Extent to which facilities or improvements are in place or available;
3. Ownership of property;
4. Project impact on public facilities relationships, especially the impact on the City's planned major circulation network;
5. Special district service territories;
6. Approved fire, drainage, sewer, or other facilities or improvement master plans.

The boundaries of the PFFP for the Otay Ranch Village 7 SPA 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.

Regional Vicinity



CITY OF CHULA VISTA

Vista Verde

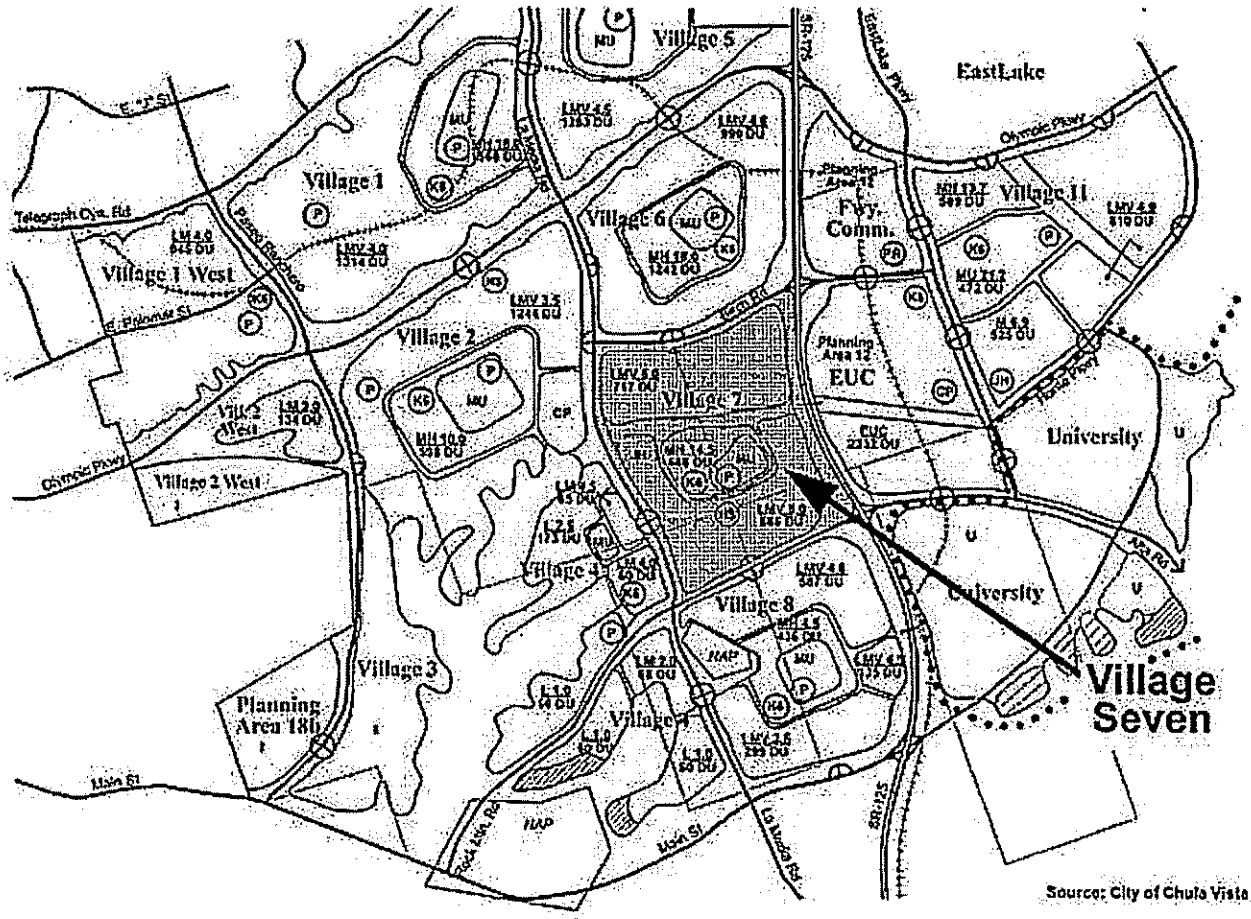
Village Seven - Otay Ranch

Citti Land Planning

3/22/04

Exhibit 1

Vicinity Map



Otay Ranch

Exhibit 2

II.5.3 LAND USE ASSUMPTIONS

II.5.3.1 Purpose

The purpose of this section is to quantify how the Otay Ranch Village 7 SPA will be analyzed in relationship to all other projects, which are at some stage 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 dated January, 2004, and is summarized on Table B.2.

The specific factors that 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 Otay Ranch Village 7 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 the Sweetwater Union High School District and the Chula Vista Elementary School District and the Otay Municipal Water District. The development-phasing forecast is a component of the City of Chula Vista's Growth Management Program. The Planning and Building 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.5.3.2 Existing Development

As a starting point, the PFFP considers all existing development up to January 2004 as the base condition. This information is based upon City of Chula Vista Planning and Building Department growth management monitoring data. According to this and other data, the population of the City as of January 2004 is estimated at 217,603. This estimate is based on city estimates of growth for 2003 and combined with data from the California Department of Finance (DOF).

For the purposes of projecting facility demands for the Otay Ranch Village 7 the City of Chula Vista utilizes a population coefficient of 3.036 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 Planning & Building Department. The same coefficient will be used for calculating the specific Otay Ranch Village 7 facility demands.

II.5.3.3 Development Phasing Forecast

A summary of the latest development-phasing forecast is shown in Table B.1. The table presents an estimate of the amount of development activity anticipated to the year 2008. The number of dwelling units forecasted from 2004 though 2008 is approximately 12,381 dwelling units. It should be noted that these projections are 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.

Table B.1
City of Chula Vista Five Year Residential Unit Growth Forecast 2004 Through 2008

Projects	Forecast of Units Finaled 2004 to 2008			Units Remaining After 2008		
	MF	SF	Total	MF	SF	Total
Otay Ranch	4,094	3,746	7,840	2,300	1,700	4,000
Eastlake	926	784	1,710	0	0	0
Rolling Hills Ranch	168	594	762	0	0	0
Bella Lago	0	140	140	0	0	0
San Miguel Ranch	411	518	929	0	0	0
Subtotal	5,599	5,782	11,381	2,300	1,700	4,000
West Chula Vista[4]	900	100	1,000			
Total	**6,499**	**5,882**	**12,381**	**4,565**	**2,653**	**7,218**

Source: City of Chula Vista 24-Month and 5-Year Residential Growth Forecast Years 2004 through 2008, January 2004.

II.5.3.4 Otay Ranch Village 7 Development Summary

The basic land use pattern for Village 7 is that of an urban village, surrounded by prime arterials and an open space buffer augmented by the major open space feature in Wolf Canyon, consistent with the Otay Ranch General Development Plan. The land use pattern implements the village concept with higher intensity uses and residential densities within a village core and decreasing intensity/density away from the core area.

The Otay Ranch Village 7 SPA project is proposed to be constructed in three phases as shown on Exhibit 4. The Otay Ranch Village 7 SPA area consists of five separate ownership parcels with a combined area of approximately 424.4 acres. McMillin Otay Ranch, LLC, owns approximately 180.2 acres, which is most of the eastern one half of Village 7. Otay Project LP owns approximately 93.3 acres, which is most of the western one half of Village 7. In the central western portion of the village, the Federal Government (FAA) owns the 51.9-acre VORTAC site. The southeast corner of Village 7 is approximately 40 acres and owned by the Otay Land Company. The southwest corner is approximately 50 acres and owned by S&MBF. Table B.3 below summarizes the land use and acreage for the Village 7 SPA project. The Site Utilization Plan (Exhibit 3) illustrates the Village 7 land uses.

The Residential land use is proposed as the predominant land use in the Village 7 SPA. The Village 7 SPA allows for a total of 726 single-family dwelling units and 448 multi-family dwelling units. Residential densities set forth by the SPA Plan range from a maximum of

[4] The number of units developed in western Chula Vista has been variable. An estimate of 50 units per year equally divided between multi and single family has been entered as a target.

14.9 dwelling units per acre for multi-family to a minimum of 6.9 dwelling units per acre for single-family uses. Additionally, a minimum of 10 percent of the total dwelling units proposed by the Village 7 SPA would provide housing for low and moderate-income households.

Three phases of development are envisioned for the Otay Ranch Village 7 SPA project. These phases will be completed non-sequentially. The necessary infrastructure is identified in this PFFP to support each phase. The Phasing Plan (Exhibit 4) reflects the anticipated market demand for commercial development. Table B.2 illustrates the vision of the GDP for the ultimate build out of the entire Village 7.

Table B.2
ADOPTED GDP Village 7
Land Use Plan

Use	Dwelling Units				Gross Acreage								Approx. Pop.
	SF	MF	Total	Density	Res.	Park*	CPF	Sch.	C'ml.	Open Space	Art.	Total	
LMV	1,053		1,053	5.0	210.6			75.0				285.6	3,370
MU						9.3	6.3		7.2			22.8	0
MH		448	448	14.5	58.6			10.0				40.9	1,142
OTHER										45.3	17.1	62.4	0
TOTAL	1,053	448	1,501	6.2	241.5	9.3	6.3	85.0	7.2	45.3	17.1	411.7	4,512

* Part of park acreage requirements have been allocated to community parks. Actual park size to be determined by Parks

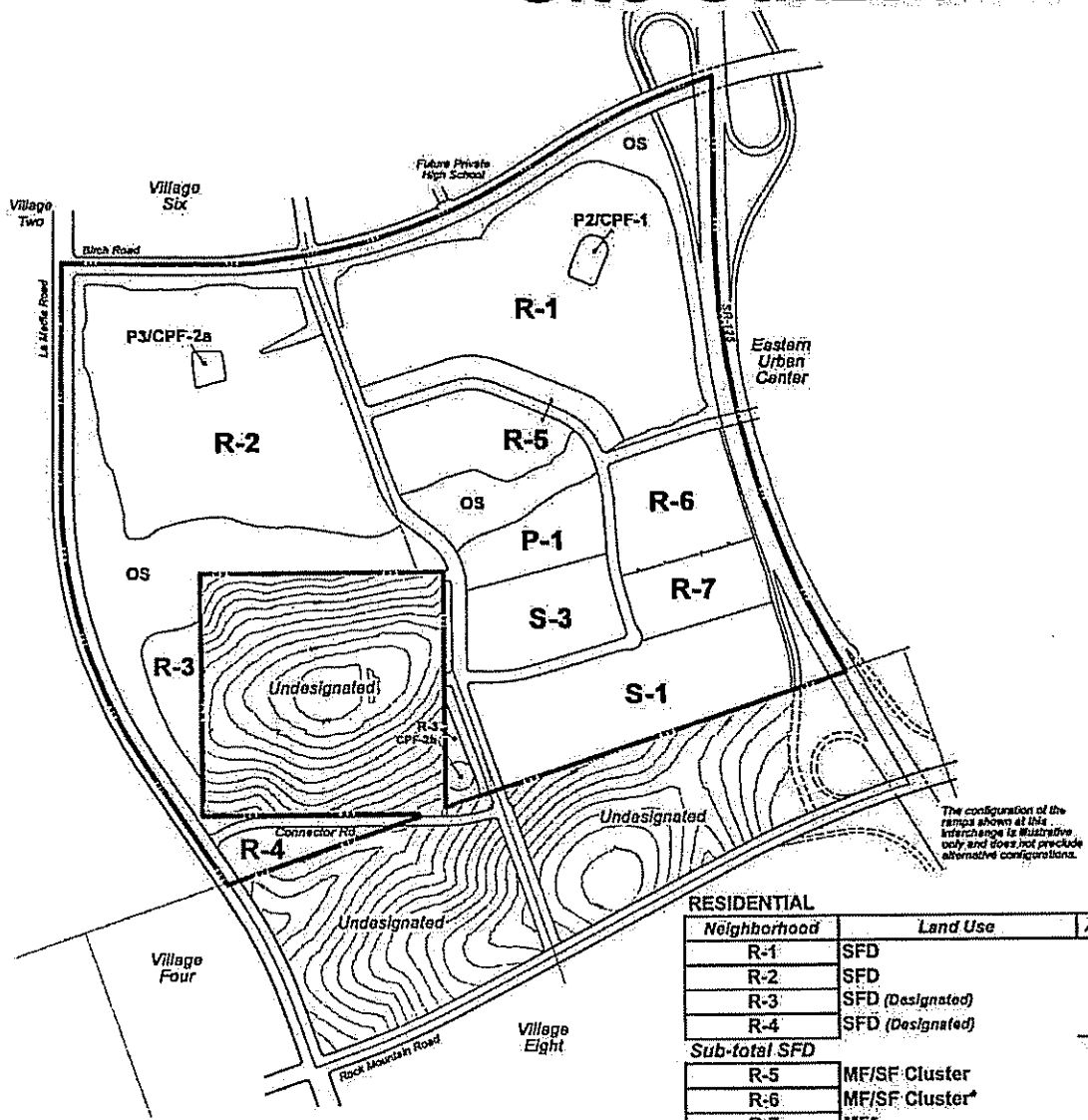
The statistics provided on the Site Utilization Plan (Exhibit 3) and Table B.3, Proposed SPA Village 7 Land Use Plan, are not directly comparable to those in the above GDP table since they do not include the VORTAC site and the Otay Land Company parcel within the current SPA area. The Site Utilization Plan is intended to be statistically consistent with the General Development Plan land use list and statistical summary while reflecting more accurate data. Site Utilization Plan acreages are based on the SPA Plan numbers that were calculated to the nearest tenth acre. These statistics are subject to change once precise engineering calculations have been completed.

Table B.3
Proposed Village 7 SPA
Land Use Plan

Use	Dwelling Units				Gross Acreage								Approx Pop.
	SF	MF	Total	Density	Res	Park	CPF	School	Open Space	Circulation	Undesignated	Total	
LMV	756		756	6.9	109.6							109.6	2295
MH		448	448	11.8	37.9							37.9	1360
OTHER						7.6	2.8	34.5	61.8	62.9*	121.3	276.9	
TOTAL	756	448	1204	8.2	147.5	7.6	2.8	34.5	61.8	62.9*	121.3	424.4	3655

* Includes Secondary Village Entry, Village Promenade, Village Core Promenade and Secondary Village Promenade (@ SR125) underpass.

Site Utilization Plan



RESIDENTIAL

Neighborhood	Land Use	Acres	du/ac	DU
R-1	SFD	50.7	6.8	346
R-2	SFD	50.5	7.4	375
R-3	SFD *(Designated)*	5.3	4.2	22
R-4	SFD *(Designated)*	3.1	4.2	13
Sub-total SFD		*109.6*	*6.9*	*756*
R-5	MF/SF Cluster	17.4	7.6	132
R-6	MF/SF Cluster*	12.5	15.4	193
R-7	MF*	8.0	15.4	123
Sub-total MF		*37.9*	*11.8*	*448*
Total Residential		147.5	8.2	1,204

NON-RESIDENTIAL

Neighborhood	Land Use	Acres
P-1	Public Park	7.6 *(7.0 ac net req'd)*
P2/CPF-1	CPF *(Common OS)*	1.1
P3/CPF-2a	CPF *(Common OS)*	0.7
CPF-2b	CPF	1.0
S-1	High School *(Designated)*	23.4
S-3	Elem. School	11.1
OS	Open Space *(Designated)*	47.8
Undesignated	Undesignated Uses	121.3
Clr.	Circulation	62.9
Total Non-Residential		276.9
VILLAGE TOTAL		424.4

** Refer to SPA Text for provisions to blend these two parcels.*

CITY OF CHULA VISTA

Vista Verde

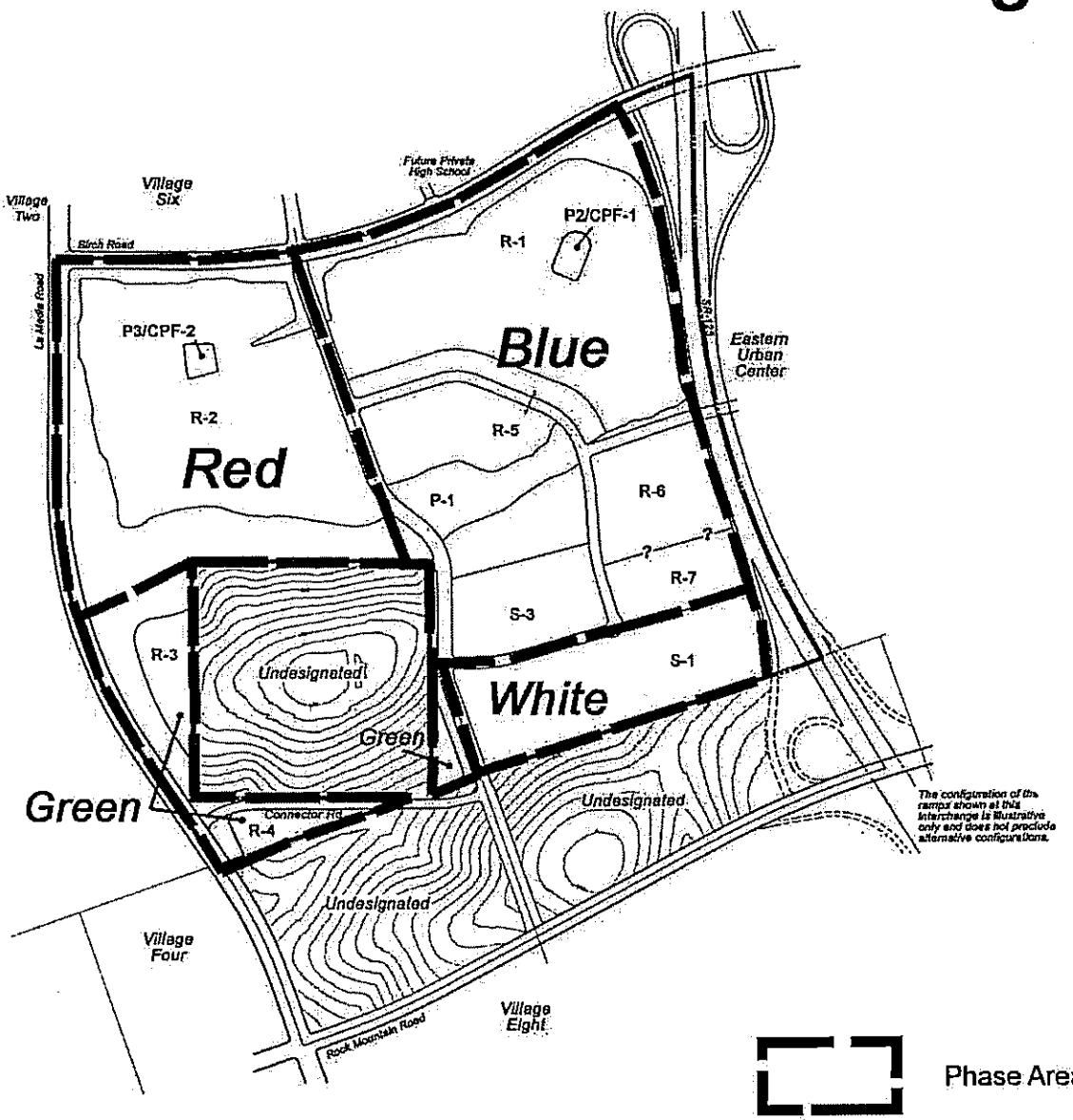
Village Seven - Otay Ranch

Cinti Land Planning

8/24/04

Exhibit 3

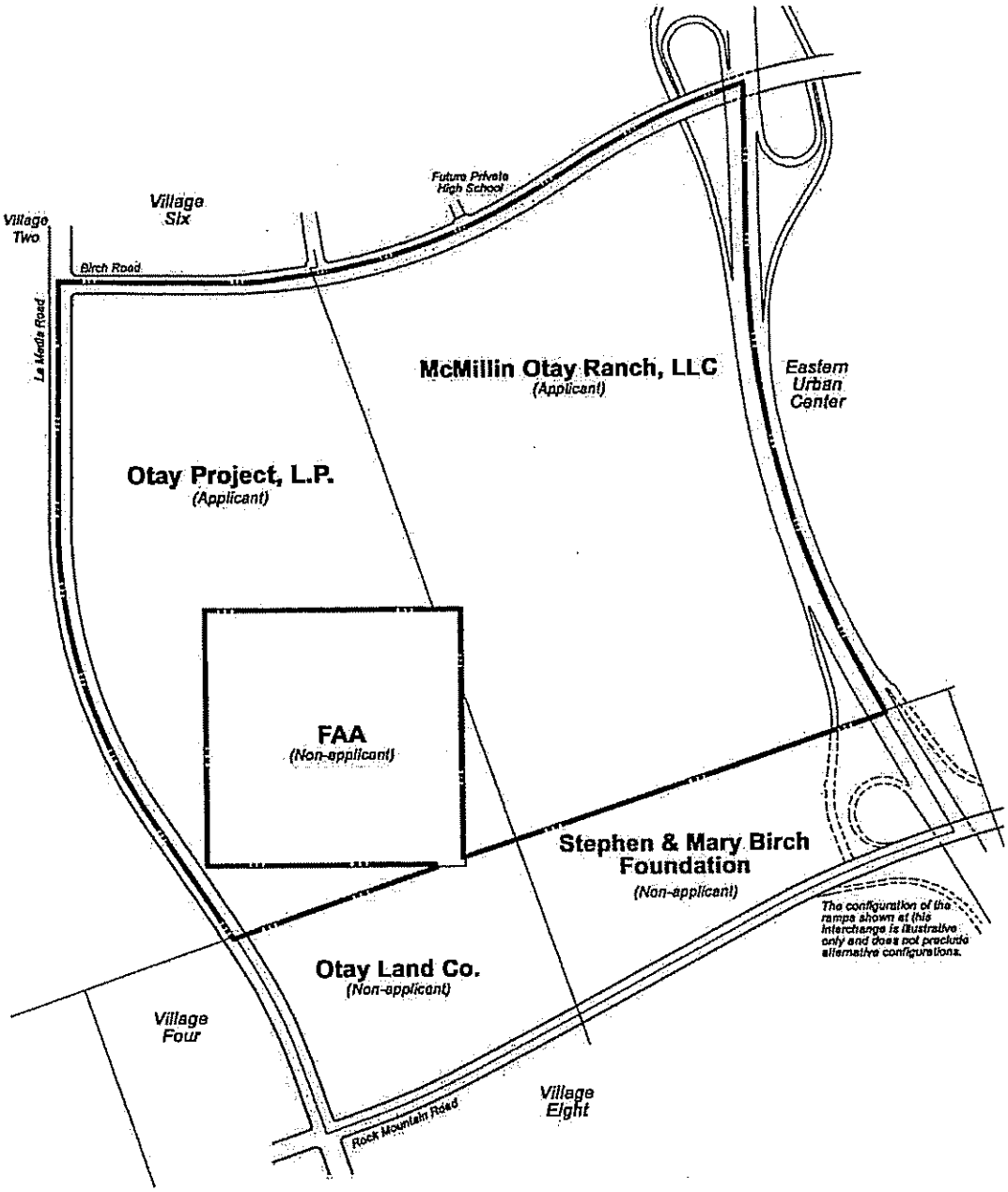
Phasing Plan



Note: Refer to the Village Seven PFFP for Phasing of Public Facilities and sub-phases.

Exhibit 4

Ownerships



CITY OF CHULA VISTA **Vista Verde**
Village Seven - Otay Ranch

Cinti Land Planning
5/24/0

Exhibit 5

II.5.3.5 DEVELOPMENT PHASING:

The development of the project will be completed in multiple, non-sequential phases to ensure construction of necessary infrastructure and amenities for each phase as the project progresses. Undesignated acres are within the Village 7 planning area but are not included in the Village 7 SPA Plan. The Phasing Plan (Exhibit 4) reflects anticipated market demand for a variety of residential and non-residential development. Table B.4 summarizes the Phasing Plan. It also reflects the anticipated ownership patterns within the Village.

Table B.4
Anticipated Development Phasing For Village 7 SPA
Table B.4

Neighborhood	Land Use	White		Blue		Red		Green		Undesignated Uses	Total Acres	DU Totals
		Ac.	DUs	Ac.	DUs	Ac.	DUs	Ac.	DUs			
Residential												
R-1	SFD			50.7	346						50.7	346
R-2	SFD					50.5	375				50.5	375
R-3	SFD							5.3	22		5.3	22
R-4	SFD							3.1	13		3.1	13
Subtotal				**50.7**	346	**50.5**	**375**	**8.4**	**35**		**109.6**	**756**
R-5	MF			17.4	132						17.4	132
R-6	MF			12.5	193						12.5	193
R-7	MF			8.0	123						8.0	123
Subtotal				**37.9**	**448**	**0.0**					**37.9**	**448**
CPF-1	CPF			1.1							1.1	
CPF-2a	CPF					0.7					0.7	
CPF-2b	CPF							1.0			1.0	
S-1	High School	23.4									23.4	
S-3	Elem. Sch			11.1							11.1	
P-1	Public Park			7.6							7.6	
Circulation		2.8		36.2		23.9		3.1			62.9	
OS				18.2		22.6		7.0			47.8	
Undesignated Uses										121.3	121.3	
Subtotal		**26.2**		**74.2**		**47.2**		**11.1**		**121.3**	**276.9**	
Total		**26.2**		**162.8**	794	**97.7**	**375**	**19.5**	**35**	**121.3**	**424.4**	**1204**

II.5.3.6 Equivalent Dwelling Units

A. Transportation

The current Transportation Development Impact Fees (TDIF) Ordinance sets forth the calculation of development impact fees for the Eastern Territories transportation improvements and for Interim Pre-SR-125 facilities.

The TDIF was last updated by City Council Ordinance 2887 on November 19, 2002. This amount is subject to change as it is amended from time to time. The City's Master Fee Schedule considers single Family Detached Dwellings at a density of less than eight Dwelling Units (DU) per gross acre Low Density Residential Developments. The current TDIF is $8,290 per Equivalent Dwelling Unit (EDU). Low Density Residential (<8 DU/gross acre) are charged one EDU/DU or $8,290/DU. Single-Family Attached Dwellings at a density of greater than eight up to twenty DUs/gross acre are considered Medium Density Residential Developments. Medium Density Residential (>8-20 DU/gross acre) are charged .8 EDU/DU or $6,632.00/DU. Multi-Family Dwellings at a density of greater than twenty DUs per gross acre are considered High Density Residential Developments. High Density Residential (>20 DU/gross acre) is charged .6 EDU/DU or $4,974/DU. General Commercial shall be charged at the rate of $174,090.00 per acre of land. Industrial shall be charged at the rate of $66,320 per acre of land. The total number of estimated commercial and industrial acres and the total number of dwelling units by phase for the Otay Ranch Village 7 SPA Plan is presented in Table B.5.

Table B.5
Otay Ranch Village 7
Dwelling Unit's & Equivalent Dwelling Unit's (EDU's)
by Phase for Transportation Facilities and SR-125 Facilities

Development Phase	Residential					
	Low Density Dwelling Units	Equivalent Dwelling Units	Medium Density Dwelling Units	Equivalent Dwelling Units	Total Dwelling Units	Total Equivalent Dwelling Units
White	0	0	0	0	0	0
Blue	346	346	448	358	794	704
Red	375	375	0	0	375	375
Green	35	35	0	0	35	35
Total	756	756	448	358	1,204	1,114

The current SR-125 Development Impact Fee is $820 per Equivalent Dwelling Unit (EDU), which may be amended from time to time. Each new single-family detached dwelling shall be considered one EDU for the purposes of this fee. A single-family attached dwelling (duplexes and condos) shall be 0.8 EDU's or $6,632/EDU. A unit within a multi-family dwelling (apartments) shall be considered 0.6 EDU's or $492/EDU. General Commercial shall be charged at the rate of $20,500.00 per acre of land. Industrial shall be charged at the rate of $16,400.00 per acre of land. The total number of estimated commercial acres and the total number of dwelling units by phase for the Otay Ranch Village 7 SPA Plan is presented in Table B.5.

B. Public Facilities

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2886 and 2887. The current fee for single family residential development is $5,048/unit, multi-family residential is $4,726/unit, commercial (including office) development is $20,764/acre and industrial development is $3,848/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA project. The calculations of the PFDIF due for each facility are addressed in the following sections of this report. Table B.6 provides a break down of what facilities the fee funds.

Table B.6
Public Facilities DIF Fee Components

Component	Single Family /DU	Multi-Family /DU	Commercial /Acre	Industrial /Acre
Civic Center	$1,089	$976	$4,245	$711
Police	$804	$1,190	$10,356	$1,070
Corporation Yard	$706	$472	$3,266	$1,361
Libraries	$753	$719	$0	$0
Fire Suppression	$450	$448	$2,245	$597
GIS, Computers, Telecommunications & Records Management	$28	$26	$111	$18
Administration	$139	$124	$541	$91
Recreation	$1,079	$771	$0	$0
Total per Residential Unit	**$5,048**	**$4,726**		
Total per Com'l/Ind. Acre			**$20,764**	**$3,848**

II.5.4 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.

Table B.7
Level of Analysis

Facility	Citywide	East of I-805	Service Area Sub-basin	Special District
Traffic	✓	✓		
Police	✓			
Fire/EMS	✓		✓	
Schools				✓
Libraries	✓			
Parks, Recreation & Open Space		✓		
Water			✓	✓
Sewer			✓	
Drainage			✓	
Air Quality	✓			
Civic Center[5]	✓			
Corp. Yard	✓			
Fiscal	✓		✓	

Each subsection analyzes the impact of the Otay Ranch Village 7 SPA based upon the adopted Quality of Life Standards. The analysis is based upon the specific goal, objective, 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 and Recommendations subsection which proposes the appropriate conditions or mitigation to bring the facility into conformance with the threshold standard.

[5] Specific Threshold Standards have not been developed for these facilities

II.5.4.1 TRAFFIC

II.5.4.1.1 GMOC Threshold Standard

1. 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 any two hours of the day.
2. West of Interstate 805: Those signalized intersections which do not meet the standard above may continue to operate at their current LOS, but shall not worsen.

II.5.4.1.2 GMOC Level of Service (LOS) Definition

Six levels of services (LOS) have been defined varying from A (free flow) to F (severe congestion). A general definition of LOS is summarized in Table C.4. The City of Chula Vista's GMOC uses an LOS definition for signalized arterial segments as a method for evaluating and comparing traffic conditions. Arterial LOS measurements consider average weekday peak hours and exclude seasonal and special circumstance variations. The following table summarizes the GMOC Traffic Quality of Life Threshold Standard for signalized arterial streets:

Table C.1
GMOC LOS Definition

Level of Service	Average Travel Speed (mph)		
	Class 1	Class 2	Class 3
A	> 35	> 30	> 25
B	> 28	> 24	> 19
C	> 22	> 18	> 13
D	> 17	> 14	> 9
E	> 13	> 10	> 7
F	< 13	< 10	< 7

SOURCE: Highway Capacity Manual, 1994.

The arterial streets are divided into the following three classifications:

(1) Class I arterials are roadways where free flow traffic speeds range between 35 mph and 45 mph and the number of signalized intersections per mile is less than four (4). There is no parking and there is generally no access to abutting property.

(2) Class II arterials are roadways where free flow traffic speeds range between 30 mph and 35 mph, the number of signalized intersections per mile range between four (4) and eight (8). There is some parking and access to abutting properties is limited.

(3) Class III arterials are roadways where free flow traffic speeds range between 25 mph and 35 mph, and the number of signalized intersections per mile are closely spaced. There is substantial parking and access to abutting property is unrestricted.

II.5.4.1.3 Freeway Segment LOS and Thresholds

The analysis of freeway segment LOS is based on the procedure developed by Caltrans District 11, which is based on methods described in the *1994 Highway Capacity Manual.* The procedure involves comparing the peak hour volume of the mainline segment to the

theoretical capacity of the roadway (V/C). Directional and truck factors are also used to calculate the future freeway volumes. V/C ratios are then compared to the V/C ranges shown on the tables to determine the LOS for each segment. Caltrans recommends LOS E or better as an acceptable threshold for determining impacts on the regional freeway system. LOS E is used as the threshold of significance because a decrease from this level of service to LOS F determines the need to develop a freeway Deficiency Plan.

Table C.2
Caltrans District 11 Freeway Segment Level of Service Definitions

LOS	V/C	Congestion/Delay	Traffic Description
Used for freeways, expressways and conventional highways			
A	<0.41	None	Free flow
B	0.42-0.62	None	Free to stable flow, light to moderate volumes.
C	0.63-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	0.81-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
E	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
Used for conventional highways			
F	<1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 sec./vehicle
Used for freeways and expressways			
F(0)	1.01-1.25	Considerable 0-1 hr delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
F(l)	1.26-1.35	Severe 1-2 hr delay	Very heavy congestion, very long queues.
F(2)	1.36-1.45	Very Severe 2-3 hr delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
F(3)	>1.46	Extremely Severe 3+ hours of delay	Gridlock

SOURCE: Caltrans 1992

Caltrans LOS Definition

The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort, convenience, and safety. LOS for freeway segments can generally be categorized per Table C.2.

II.5.4.1.4 Segment LOS Standards and Thresholds

This section presents the LOS standards and thresholds utilized by the City of Chula Vista to analyze roadway segment performance. Table C.3 presents the City of Chula Vista roadway segment capacity and level of service standards for arterial roadways.

Table C.3
Chula Vista Segment Capacity and LOS Standards Average Daily Traffic Volumes

Functional Classification	Level of Service				
	A	B	C	D	E
Expressway (6-lane)	52,500	61,300	70,000	78,800	87,500
Prime Arterial (6-lane)	37,500	43,800	50,000	56,300	62,500
Major Street (6-lane)	30,000	35,000	40,000	45,000	50,000
Major Street (4-lane)	22,500	26,300	30,000	33,800	37,500
Class I Collector (4-lane)	16,500	19,300	22,000	24,800	27,500
Class II Collector (3-lane)	9,000	10,500	12,000	13,500	15,000
Class III Collector (2-lane)	5,600	6,600	7,500	8,400	9,400

SOURCE: City of Chula Vista Street Design Standards Policy (July 1991)

Table C.4
Street Segment Level of Service Threshold Descriptions

LOS	Description
A	Describes primarily free-flow operations. Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.
B	Also represents reasonably free-flow, and speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.
C	Provides for flow with speeds still at or near the free-flow speed of the roadway. Freedom to maneuver within the traffic stream is noticeably restricted at LOS C, and lane changes require more vigilance on the part of the driver. The driver now experiences a noticeable increase in tension because of the additional vigilance required for safe operation.
D	The level at which speeds begin to decline slightly with increasing flows. In this range, density begins to deteriorate somewhat more quickly with increasing flows. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.
E	Describes operation at capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream. At capacity, the traffic stream has no ability to dissipate even the most minor disruptions, and any incident can be expected to produce a serious breakdown with extensive queuing.
F	Describes breakdowns in vehicular flow. Such conditions generally exist within queues forming behind breakdown points such as traffic incidents and recurring points of congestion. Whenever LOS F conditions exist, there is a potential for them to extend upstream for significant distances.

SOURCE: Highway Capacity Manual, 1994.

The analysis of street segment LOS is based on the functional classification of the roadway, the maximum desired level of service capacity, roadway geometries, and the existing or forecasted average daily traffic (ADT) volume. City of Chula Vista LOS D were utilized to determine if a segment would operate over or under capacity. Table C.3, Street Segment Level of Service Threshold Descriptions, is a description of the various street segment LOS thresholds.

II.5.4.1.5 Intersection LOS Standards and Threshold

The analysis of existing and projected peak hour intersection performance was conducted using the methodology documented in the *1994 Highway Capacity Manual (Transportation Research Board Special Report 209)*. LOS C or better indicates acceptable operating conditions for signalized intersections during AM and/or PM peak hour conditions. Those intersections found to have LOS E or F under an analysis of future conditions are considered to have significant impacts and will require mitigation.

II.5.4.1.5.1 Signalized Intersection Analysis

The measure of effectiveness for intersection operations is level of service. In the 2000 Highway Capacity Manual (HCM), LOS for signalized intersections is defined in terms of delay. The LOS analysis results in seconds of delay expressed in terms of letters A through F. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Table C.5 is a description of the various intersection LOS thresholds.

Table C.-5
Intersection LOS Threshold Descriptions

Level of Service	Description
A	LOS A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	LOS B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	LOS C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	LOS D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are more frequent.
E	LOS E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.
F	LOS F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

SOURCE: Highway Capacity Manual, 2000.

II.5.4.1.5.2 Unsignalized Intersection Analysis

For unsignalized intersections, level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Table C.6 below depicts the criteria, which are based on the average control delay for any particular minor movement.

Table C.6 Level of Service Thresholds for Unsignalized Intersections		
Average Control Delay Per Vehicle (Seconds/Vehicle)	**Level of Service**	**Expected Delay to Minor Street Traffic**
0.0 ≤ 10.0	A	Little or no delay
10.1 to 15.0	B	Short traffic delays
15.1 to 25.0	C	Average traffic delay
25.1 to 35.0	D	Long traffic delays
35.1 to 50.0	E	Very long traffic delays
≥ 50.0	F	Severe congestion

Source: Highway Capacity Manual, 2000.

LOS F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This LOS is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

II.5.4.1.6 Chula Vista Traffic Monitoring Program (TMP)

The TMP stipulates that the existing level of service on arterial segments in Chula Vista be maintained at LOS C or better, with the exception that LOS D is acceptable on signalized arterial segments for two hours per day maximum. The Public Works Department of the City of Chula Vista evaluates LOS for arterial roadway segments utilizing the HCM methodology, Chapter 11, based on average travel speeds, to adhere to the Growth Management traffic threshold standards. The adopted Growth Management Ordinance mandates the project's participation in the traffic section as it relates to the City's annual review of network performance. All major circulation element facilities within the City of Chula Vista are subject to review. Those facilities where traffic volumes have increased by at least 10% since the last review or have experienced a significant change in conditions or are at the upper fringes of LOS C approaching LOS D are included in the annual traffic study, which is reviewed for conformance by the Growth Management Oversight Committee (GMOC). The City of Chula Vista requires the application of these guidelines to the future development of the Otay Ranch Village 7 SPA Project.

Utilization of the roadway and intersection performance standards presented in this chapter and the required adherence to the Growth Management traffic threshold standards will result in full conformance with the requirements of the City of Chula Vista.

II.5.4.1.7 Service Analysis

The Engineering Division of Chula Vista's General Services Department 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 200 peak hour trips (As detailed in the 1991 Congestion Management Program). This analysis, *Traffic Impact Analysis for Otay Ranch Village 7, May 20, 2004, by Linscott, Law and Greenspan* (LL&G) was prepared for the City of Chula Vista. This document is referred to as the "LL&G Traffic Analysis" throughout this PFFP. The LL&G Traffic Analysis addresses both existing and planned circulation system conditions, details necessary improvements and outlines the incremental circulation improvements based upon planned project phasing. Further, the Traffic Impact Analysis also includes an evaluation of impacts that are considered significant as a result of project development.

Based on the distribution of project traffic as determined by the Select Zone Assignment (SZA) and the requirements of the CMP, the project study area was established. The study area is bound by Telegraph Canyon Road/Otay Lakes Road to the north, Hunte Parkway to the east. Main Street to the south and Interstate 805 (I-805) to the West. All signalized intersections, freeway interchanges and arterial segments within this area were analyzed under various scenarios by LL&G (see LL&G Traffic Analysis for scenario details). The proposed circulation network (described later in this section) was analyzed in the GPA currently being completed. The project access intersections on Birch Road, rock Mountain and La Media were also analyzed. The following Circulation Element intersections and segments analyzed in the LL&G Traffic Analysis report are listed below:

A. **Intersections:**

1. Telegraph Cyn Rd/I-805 SB Ramps
2. Telegraph Cyn Rd/I-805 NB Ramps
3. Telegraph Cyn Rd/Oleander Ave.
4. Telegraph Cyn Rd/Medical Center Dr
5. Telegraph Cyn Rd/Paseo Ranchero/Heritage Rd.
6. Telegraph Cyn Rd/Otay Lakes Rd./La Media Rd.
7. Otay Lakes Rd/SR-125 SB Ramps*
8. Otay Lakes Rd/SR-125 NB Ramps*
9. Otay Lakes Rd/Eastlake Parkway
10. Otay Lakes Rd/Hunte Parkway
11. Palomar Street/Oleander Ave.
12. Palomar Street/Brandywine Av.
13. Palomar Street/Heritage Road
14. Palomar Street/La Media Road
15. Olympic Parkway/I-805 SB Ramps
16. Olympic Parkway/I-805 NB Ramps
17. Olympic Parkway/Oleander Ave.
18. Olympic Parkway/Brandywine Ave.
19. Olympic Parkway/Heritage Rd.
20. Olympic Parkway/La Media Rd.
21. Olympic Parkway/Palomar Street
22. Olympic Parkway/SR-125 SB Ramps*
23. Olympic Parkway/SR-125 NB Ramps*
24. Olympic Parkway/Eastlake Parkway
25. Olympic Parkway/Hunte Parkway
26. Main Street/I-805 SB Ramps
27. Main Street/I-805 NB Ramps
28. Main Street/Oleander Avenue

29. Main Street/Brandywine Avenue
30. Birch Road/Heritage Road*
31. Birch Road/La Media Road*
32. Birch Road/SR-125/SB Ramps*
33. Birch Road/ SR-125/NB Ramps*
34. Birch Road/Eastlake Parkway*
35. Rock Mountain Road/La Media Rd.
36. Rock Mountain Road/SR-125 SB Ramps*
37. Rock Mountain Road/SR-125 NB Ramps*
38- Hunte Parkway/Eastlake Parkway
39. Heritage Road/Main St.*
40. Rock Mountain Road/Main St.*
41. Main Street/La Media Rd*
42. Main Street SR-125 SB Ramps*
43. Main Street SR-125 NB Ramps*

* Future Intersections

B. Segments

- **Telegraph Canyon Road**

- I-805 to Oleander Ave.
- Oleander Ave. to Medical Center Dr.
- Medical Center Dr. to Paseo Ranchero/Heritage Rd.
- Paseo Ranchero/Heritage Rd. to Otay Lakes Rd.

- **Otay Lakes Road**

- North of Telegraph Canyon Rd.
- La Media Rd. to SR-125
- SR-125 to Eastlake Parkway
- Eastlake Parkway to Lane Ave.

- **Palomar Street**

- I-805 to Oleander Ave.
- Oleander Ave. to Medical Center Dr.
- Medical Center Dr. to Heritage Rd.
- Heritage Rd. to La Media Rd.
- La Media Rd. to Olympic Parkway

- **Olympic Parkway**

- I-805 to Medical Center Dr.
- Medical Center Dr. to Heritage Rd.
- Heritage Rd. to La Media Rd.
- La Media Rd. to Palomar Street
- Palomar Street to Eastlake Parkway
- Eastlake Parkway to Hunte Parkway

- **Birch Road**

- La Media Rd. to SR-125
- SR-125 to Eastlake Parkway

- **Rock Mountain Road**

- Rock Mountain to La Media Rd.
- La Media Rd. to SR-125
- SR-125 to Eastlake Parkway

- **Main Street**

- I-805 to Oleander Ave.
- Oleander Ave. to Brandywine Ave.
- Brandywine Ave. to Heritage Rd.
- Heritage Rd. to Rock Mountain Rd.
- Rock Mountain Rd. to La Media Rd.
- La Media Rd. to SR-125 SB Ramps

- **Oleander Avenue**
- Telegraph Canyon Rd. to Palomar Street
- Palomar Street to Olympic Parkway
- Olympic Parkway to Main Street

- **Medical Center Drive**
- Telegraph Canyon Rd. to Palomar Street

- **Brandywine Avenue**
- Palomar Street to Olympic Parkway
- Olympic Parkway to Main Street

- **Paseo Ranchero**
- North of Telegraph Canyon Rd.
- Telegraph Canyon Rd. To Palomar Street
- Palomar Street to Olympic Parkway
- Olympic Parkway to Birch Rd.
- Birch Rd. to Main Street

- **La Media Road**
- Telegraph Canyon Rd. to Palomar Street
- Palomar Street to Olympic Parkway
- Olympic Parkway to Birch Rd.
- Birch Rd. to Rock Mountain Rd.
- Rock Mountain Rd. to Main Street

- **Eastlake Parkway**
- Fenton Street to Otay Lakes Rd.
- Otay Lakes Rd. to Olympic Parkway
- Olympic Parkway to Birch Rd.
- Birch Rd. to Rock Mountain Rd.

- **Hunte Parkway**
- Otay Lakes Rd. to Clubhouse Dr.
- Clubhouse Dr. to Olympic Parkway
- Olympic Parkway to Eastlake Parkway

C. **Traffic Analysis**

Three alternate land use plans are under consideration by the City of Chula Vista as part of the 2020 General Plan Update (GPU) for Villages 2, 3, 4, 7, 8 and 9. Adoption of the General Plan Update is anticipated prior to the approval of the Village Two SPA Plan. The Village Two proposed project is contained in GPU Alternative 2, which also contains the most intensive residential densities of the three alternatives. Therefore, the most intensive land uses proposed in General Plan Update Alternative 2 was included by LL&G in their analysis to insure the worst-case scenario is analyzed. The other GPU plans in Alternatives 1 and 3 are less intense and were not included in the LL&G Traffic Analysis.

The LL&G Traffic Analysis considered the Adopted and Proposed Circulation Elements. In the adopted circulation element, Main Street extends east to SR 125, with an interchange at SR 125. Rock Mountain Road intersects Main Street between Heritage Road and La Media Road. In the proposed Circulation Element, Main Street terminates at Heritage Road. The Main Street/SR 125 interchange will no longer be built. Rock Mountain Road is the east leg of the Heritage Road/Main Street intersection and La Media Road will terminate in Village 8.

A total of 10 Scenarios were analyzed in the LL&G Traffic Analysis, which have different assumptions concerning the study area, land use and roadway network. A detailed description of each scenario is provided in the LL&G Traffic Analysis.

D. SANDAG Traffic Modeling

The basis of the LL&G Traffic Analysis is the Series 10.0, 2030 City/County Forecast Traffic Model, which is produced by the San Diego Association of Governments (SANDAG). Linscott, Law & Greenspan worked with the City of Chula Vista and SANDAG to input the proper land use and network designations into the model for the 10 study scenarios. Details of each study scenario is provided in the LL&G Traffic Analysis.

For each of the study scenarios, the model was run with the appropriate land use, City of Chula Vista Circulation Element and the planned SR 125 assumptions for the entire study area. The Village 7 SPA land uses were coded into the Traffic Model exactly as proposed or adopted as appropriate. After the proper land use intensities and network configurations were entered into the model for each study scenario, the model was run. The SANDAG model outputs Average Daily Traffic volumes (ADTs) on all Circulation Element street segments.

The SANDAG model volumes for each scenario were used exactly as indicated in the output plot with two exceptions. The volumes on Telegraph Canyon Road between I-805 and Heritage Road for the Year 2010 and beyond appeared unusually high as compared to parallel east/west routes East "H" Street and Olympic Parkway. While volumes on Telegraph Canyon Road were in the high 60,000's, volumes on East "H" Street and Olympic Parkway were in the 40,000's. This is not realistic since most project traffic and other eastern territories traffic is in no way, forced to use Telegraph Canyon Road. Past modeling has shown a more even distribution among the three (3) east/west facilities. Therefore about 15% of the Telegraph Canyon Road traffic was shifted to East "H" Street and Olympic Parkway. This percentage shift results in a relatively equitable distribution among the three principal east/west routes. It should be noted that the total traffic on the corridor that includes East "H" Street, Telegraph Canyon Road and Olympic Parkway was not reduced at all. It was only reallocated.

Similarly, the volumes on Otay Lakes Road between SR 125 and Eastlake Parkway were extremely high (in the 80,000's), while parallel volumes on East "H" Street and Olympic Parkway were in the 30,000's and 40,000's. This is not realistic since traffic will generally flow to the area of least resistance. Therefore, the ADT on Otay Lakes Road between SR 125 and Eastlake Parkway was reduced by about 25% and this traffic was shifted to East "H" Street and Olympic Parkway. This percentage shift results in a relatively equitable distribution among the three principal east/west routes. Again, the overall traffic was not reduced in any way.

E. GMOC Analysis

Analysis of roadway segments under near-term conditions (Years 0-4) is conducted using the methodology described in the most recent version of the Highway Capacity Manual (HCM), Chapter 11 (Arterial Streets), which determines segment level of service based on speed. Classification of facilities and definition of segment lengths should be consistent with the City's current Growth Management Traffic Monitoring Program. The Threshold Standard for these arterial analyses requires the maintaining of LOS 'C' or better as measured by average travel speeds except that LOS 'D' can occur for no more

than any two hours of the day. Thus, if LOS 'D' condition is determined for any period of two (2) hours, additional analysis may be required along these high volume segments based on direction provided by the City Engineer.

For planned arterial facilities that are not currently included in the current Traffic Monitoring Program, the definition of segment length and facility classification will be based on direction provided by the City Engineer.

A near-term analysis of Telegraph Canyon Road arterial segments was conducted by LL&G based on the City of Chula Vista's GMOC Traffic Monitoring Program (TMP) methodology (see Table C.7). Only this segment was analyzed because the City of Chula Vista's significance criteria dictates that if planning analysis (v/c) indicates LOS D, E or F, the GMOC method shall be utilized in the short-term (0-4 year horizon). No studies were done on Olympic Parkway since a major portion of Olympic Parkway has just been constructed and no historical data is available.

Table C.7
Telegraph Canyon Road (Class II)
Existing TMP Speeds And LOS Conditions

Time And Direction	I-805 to Paseo Ranchero		Paseo Ranchero to Otay Lakes Road	
	SPEED	LOS	SPEED	LOS
AM Westbound	29.4	B	40.4	A
PM Eastbound	28.7	B	36.0	A

Source: City of Chula Vista TMP Data, 2004.

II.5.4.1.8 Project Processing Requirements

The PFFP is required by the Growth Management Program to address the following issues for the Traffic Facilities:

A. Identify onsite and offsite impacts and improvements by phase of development.

B. Provide cost estimates for all improvements.

II.5.4.1.9 Existing Conditions

This section summarizes the operation of the existing transportation network in the project study area for the key freeway segments, street segments, and intersections.

Following are brief descriptions of the existing streets in the project area.

A. Freeway Segments

I-805 is a north-south freeway, which originates in South County and terminates at its connection with the I-5 Freeway near Del Mar, California. Local interchanges in the project vicinity are at Olympic Parkway, Telegraph Canyon Road, and East H Street. I-805 is generally an eight-lane freeway between I-805 and SR-54 with auxiliary lanes present between some interchanges. LL&G determined that all study area freeway mainline segments are calculated to currently operate at LOS D or better in both northbound and southbound directions in the AM and PM peak hours.

B. Existing and Planned City Street System

The following provides a brief description of the existing and planned street system in the vicinity of the project area. This area roughly encompasses the Otay Ranch and adjacent areas between I-805 to the west, lower Otay Reservoir to the east, almost to East H Street on the north and Main Street to the south (see Exhibit 6).

- **Telegraph Canyon Road/Otay Lakes Road**
  Telegraph Canyon Road/Otay Lakes Road provides east-west access though the northern portions of the study area. Telegraph Canyon Road/Otay Lakes Road is classified as a Six-Lane Major west of Paseo del Rey, and as a Six-Lane Prime Arterial east of Paseo del Rey in the City of Chula Vista Circulation Plan. Today, it is generally a six-lane facility, which transitions into a Class I Collector to the east of Hunte Parkway. Bike lanes exist on both sides of the road and bus stops are located intermittently along Telegraph Canyon Road /Otay Lakes Road. On-street parking is prohibited. The posted speed limit is 40 mph from I-805 to Crest Drive/Oleander Avenue, 45 mph from Crest Drive/Oleander Avenue to Old Telegraph Canyon Road, and 50 mph from Old Telegraph Canyon Road to Hunte Parkway.

- **Palomar Street**
  Palomar Street is classified as a Four-Lane Major Street in the City of Chula Vista Circulation Plan. Currently, it is a four-lane divided road. On-street parking is prohibited. The posted speed limit is 35 mph and bike lanes are provided.

- **Olympic Parkway**
  Olympic Parkway is classified as a Six-Lane Prime Arterial from I-805 to Hunte Parkway, and as a Four-Lane Major east of Hunte Parkway in the City of Chula Vista Circulation Plan. On-street parking is prohibited. The posted speed limit is 45 mph. Bike Lanes are provided. The section of Olympic Parkway from La Media Road to Hunte Parkway was recently completed and is open to traffic. A raised median is provided along Olympic Parkway.

- **Oleander Avenue**
  Oleander Avenue is classified as a Class 11 Collector in the City of Chula Vista Circulation Plan. Currently, Oleander is a two-lane undivided roadway with two lanes of travel. Bike lanes are not provided. Curbside parking is permitted. The posted speed limit is 25 mph.

- **Medical Center Drive**
  Medical Center Drive is classified as a Class I Collector in the City of Chula Vista Circulation Plan and currently provides four lanes of travel. Bike lanes exist on both sides of the street and curbside parking is prohibited. The posted speed limit is 25 mph. Medical Center Drive becomes Brandywine Avenue south of E. Palomar Street.

- **Brandywine**
  Brandywine Avenue is classified as a Class I Collector in the City of Chula Vista Circulation Plan and currently provides four lanes of travel narrowing to two lanes with a two-way turn lane. Just north of Main Street. Bike lanes exist on both sides of the street and curbside parking is generally prohibited except in the two-lane section of Brandywine Avenue. The posted speed limit is 25 mph.

- **Paseo Ranchero**
  Paseo Ranchero is classified as a Class I Collector in the City of Chula Vista Circulation Plan and becomes Heritage Road south of Telegraph Canyon Road. Currently, Paseo Ranchero is an undivided roadway with four lanes of travel and a center two-way turn lane. Bike lanes exist today on both sides of the road and curbside parking is prohibited. The posted speed limit is 40 mph.

- **Heritage Road**
  Heritage Road is classified as a Six-Lane Prime Arterial in the City of Chula Vista Circulation Plan. Heritage Road currently ends at Olympic Parkway and is a six-lane prime arterial. Bike lanes exist today on both sides of the road; therefore curbside parking is prohibited. The posted speed limit is 40 mph.

- **La Media Road**
  La Media Road is classified as a Six-Lane Prime Arterial in the City of Chula Vista Circulation Plan. Currently, La Media Road terminates at Santa Venetia, and serves a newly opened high school and fire station. It is planned to open the section further south to Birch Road shortly. Six lanes of travel with a raised median are currently provided. Bike lanes exist today on both sides of the road; therefore curbside parking is prohibited. The posted speed limit is 40 mph.

- **Eastlake Parkway**
  Eastlake Parkway is classified as a Four-Lane Major Street in the City of Chula Vista Circulation Plan, between north of Otay Lakes Road to South of SDG&E easement and as a Six-Lane Major Road south of the SDG&E easement in Eastlake Greens. Currently, it provides four lanes (two lanes in each direction). The new section of Eastlake Parkway from south of Clubhouse Drive to Olympic Parkway is has six lanes of travel. Eastlake Parkway currently terminates at Olympic Parkway. Bike lanes exist on either side of the road and curbside parking is prohibited.

- **Hunte Parkway**
  Hunte Parkway is classified as a Four-Lane Major Arterial from Otay Lakes Road to Olympic Parkway in the City of Chula Vista Circulation Plan. Currently, it extends south of Otay Lakes Road to Olympic Parkway as a Four-Lane Major Street arterial with a posted speed limit of 45 mph. Bike lanes exist on either side of the road and curbside parking is prohibited. This facility connects to Olympic Parkway to the south. Construction of Hunte Parkway as a 6-lane Prime Arterial from Olympic Parkway to Eastlake Parkway is proposed.

- **Birch Road**
  Birch Road is classified as a Six-Lane Major Street between La Media Road and SR-125 and a six-lane Prime Arterial between SR-125 and Eastlake Parkway in the City of Chula Vista Circulation Plan. Currently, it does not exist. However, the section between la media Road and Magdalena Avenue in Village 6 is under construction.

C. Existing Street Segments

- **Daily Segment Volumes**
  LL&G obtained existing Average Daily Traffic (ADT) volumes from the City of Chula Vista where available. If Year 2000 or later ADT volumes were not available, the ADT was calculated from the peak hour intersection turning movement counts

assuming the PM peak hour traffic is 10 percent of the daily traffic for some segments.

- **Daily Segment LOS**
  LL&G determined that the levels of service on all the key segments are operating better than LOS D except the following segments:

  Telegraph Canyon Road
  I-805 to Oleander Avenue (LOS F)
  Oleander Avenue to Medical Center Drive (LOS E)
  Paseo Ranchero to Otay Lakes Road (LOS D)

  Currently, the City is in the process of widening Telegraph Canyon Road between the Canyon Plaza Entrance and I-805 northbound ramps to provide 4 westbound lanes. Widening of Olympic Parkway at I-805 to provide two through lanes in both directions across I-805 are in advanced stages of planning.

D. Peak hour intersection

Peak hour intersection turning movement volumes were conducted in July and September 2003 at the following study area intersections. Peak hour data for intersections along Main Street, which were available from previous traffic studies, were also used.

1. Telegraph Cyn Rd/I-805 SB Ramps
2. Telegraph Cyn Rd/I-805 NB Ramps
3. Telegraph Cyn Rd/Oleander Avenue
4. Telegraph Cyn Rd/Medical Center Dr.
5. Telegraph Cyn Rd/Paseo Ranchero/Heritage Rd.
6. Telegraph Canyon Road/Otay Lakes Road/La Media Road
7. Otay Lakes Road/Eastlake Parkway
8. Otay Lakes Road/Hunte Parkway
9. Palomar Street/Oleander Avenue
10. Palomar Street/Brandywine Avenue
11. Palomar Street/Heritage Road
12. Palomar Street/La Media Road
13. Olympic Parkway/I-805 SB Ramps
14. Olympic Parkway/I-805 NB Ramps
15. Olympic Parkway/Oleander Ave.
16. Olympic Parkway/Brandywine Ave.
17. Olympic Parkway/Heritage Rd.
18. Olympic Parkway/La Media Rd.
19. Olympic Parkway/Palomar St.
20. Olympic Parkway/Eastlake Parkway
21. Olympic Parkway/Hunte Parkway
22. Main Street/I-805 SB Ramps
23. Main Street/I-805 NB Ramps
24. Main Street/Oleander Avenue
25. Main Street/Brandywine Avenue

- **Peak Hour Intersection LOS**
  The LL&G Traffic Analysis analyzed the existing AM and PM peak hour operations of 25 key signalized intersections. These intersections are calculated to currently operate at LOS D or better except the following:

  1. Telegraph Canyon Rd/I-805 NB Ramps (LOS E in the PM peak hour)
  2. Olympic Parkway/I-805 SB Ramps (LOS E in the PM peak hour)
  3. Olympic Parkway/I-805 NB Ramps (LOS E in the AM peak hour)

Key Streets and Intersections

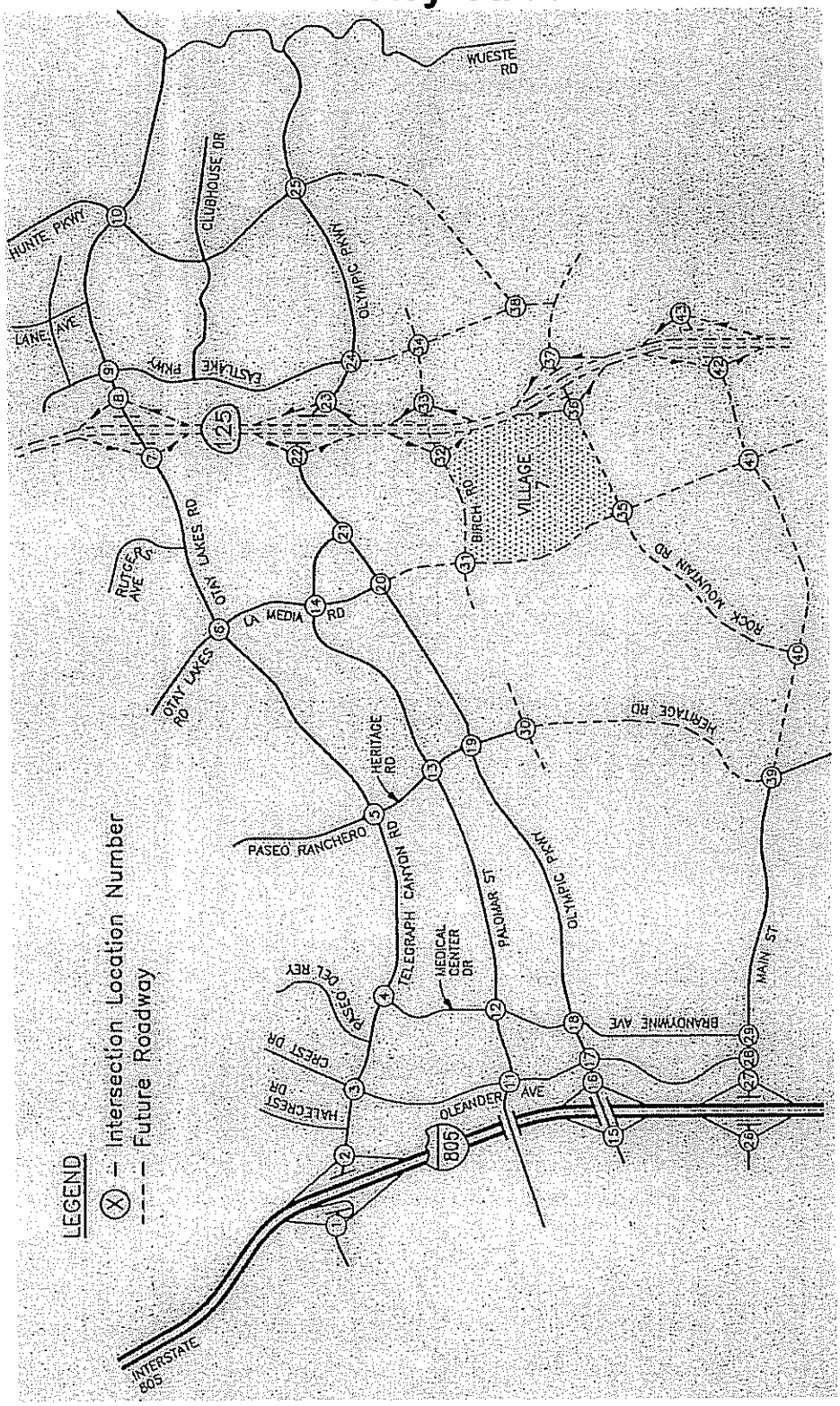


Exhibit 6

II.5.4.1.10 Transit

Public transportation creation is an integral part of the Otay Ranch Community. The design of the project area promotes access to public transit and locates land uses in proximity to proposed transit stations. Chula Vista Transit (CVT) provides bus service through the Eastern Territories of the City that can be extended to serve the project area. Regional transit plans also provide for commuter lines to serve villages in Otay Ranch.

The Village 7 SPA is not located along the light rail transit route. However, three transit stops are planned for the project. The conceptual transit system plan for the SPA Plan area is shown in Exhibit 7. The exhibit depicts several levels of service that are consistent with regional transit plans: a yellow line regional commuter service located on Olympic Parkway, a red line commuter service located on La Media Road and a blue line local Chula Vista transit on Heritage Road. Blue line or green line shuttle bus service can also be located through the Village core of the project.

The Metropolitan Transit Development Board (MTDB) is currently working with the City of Chula Vista to develop a Southbay Transit First Study that will be completed in conjunction with the city's General Plan Update. The study includes the project site; therefore, the following information is included in this document.

MTDB has developed the "Transit First" service concept to reduce the public's dependence upon the automobile. Transit and land use patterns should work together. The easy access to transit facilities in correlation with the service offered can make transit a viable travel mode alternative to the automobile, thus reducing traffic congestion. Currently, two percent of trips are conducted on public transit in the region. Efforts should be made to increase this travel mode split by making transit accessible and convenient. Additionally, providing transit facilities will meet the objectives of the City's CO_2 Reduction Plan which mentions transit as one of the action measures to reducing CO_2 emissions along with enhanced pedestrian connections to transit, increased housing density near transit, and site design with transit orientation.

The "Transit First" strategy includes a network of service types ranging from neighborhood shuttles serving short-distance trips, to higher-speed, limited stop routes for longer distance trips. The service types planned for the Otay Ranch are as follows:

A. Yellow Car: Serves longer-distance trips (6+ miles), maintaining high average speeds (35-40 mph) with limited stops. Yellow Car routes would complement Red Car services to form the spine of the regional transit system. Yellow Car services would require extensive use of transit priority treatments such as dedicated running ways, queue jumpers, and signal priority. Yellow Car service is used in two ways:
   - Serving corridors where longer station spacing is justified based on links between major origins and destinations and land use patterns that lead to longer-distance trip making.
   - Serving as an overlay in selected Red Car corridors where a faster, more limited-stop service is justified (in addition to Red Car service) for high-volume, long-distance trip needs.

B. Red Car: Serves medium-distance trips (1-9 miles), maintaining relatively high average speeds (20-25 mph) with limited stops. Red Car services are often linked to Blue Car service for local distribution. The current San Diego Trolley system and the County's express bus routes mostly operate as Red Car service. Red Car services would require

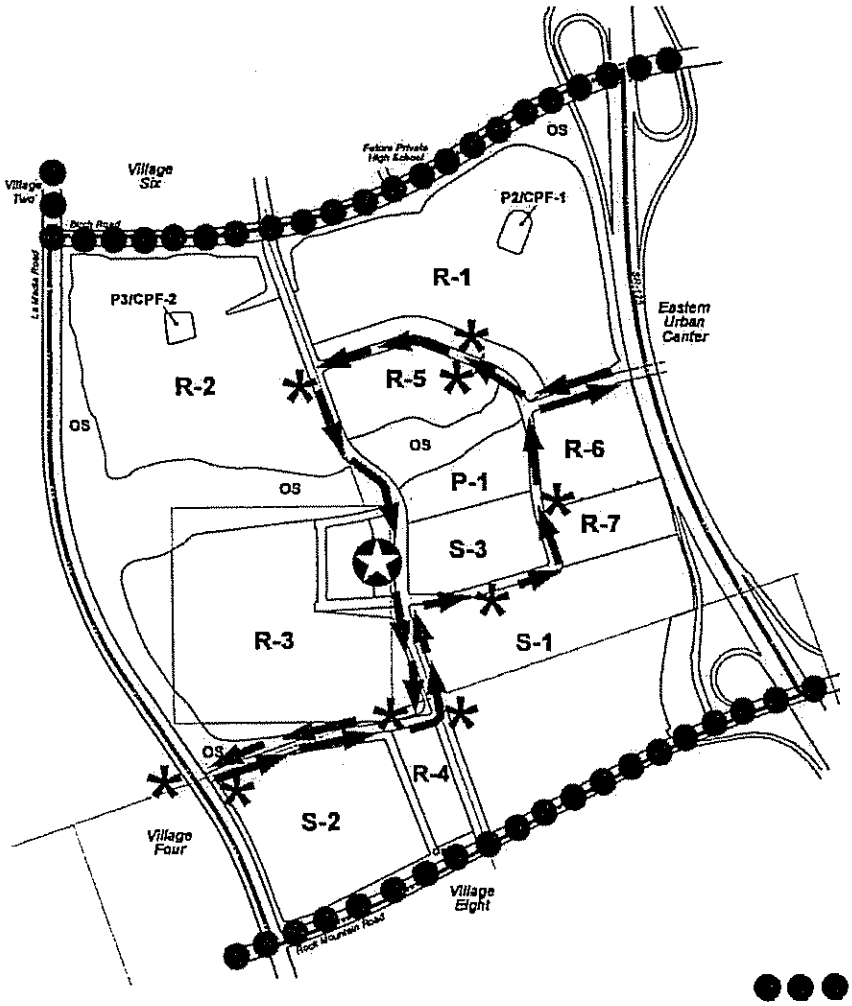
use of transit priority treatments such as dedicated running ways, queue jumpers, and signal priority.

C. Green Car: Serves community-level trip making that could include neighborhood circulators, feeder access to Yellow and Red Car service, and/or specialized fixed-route shuttles. Green Car services would likely use smaller shuttle vehicles. In some situations, Green Car services would benefit from dedicated running ways and queue jumpers.

D. Blue Car: Serves short-distance trips (0-5 miles) with frequent stop spacing. Blue Car service provides basic mobility, albeit at low speeds (10-25 mph), on primarily local and arterial streets. Most of the current San Diego region bus system operates as Blue Car service.

The Metropolitan Transit Development Board of Directors has endorsed a "Tier One" Plan of proposed Yellow Car and Red Car alignments identified through the South Bay Transit First (SBTF) Study. These routes have the best chance of being implemented initially.

Transit Plan



City-wide Transit Routes *(Blue Car)*

Internal Transit Routes *(Green Car)*

Bus Stop with Shelter & Turnout

Curbside Bus Stop

CITY OF CHULA VISTA

Vista Verde

Village Seven - Otay Ranch

Civil Land Planning

3/22/04

Exhibit 7

II.5.4.1.11 Trip Generation and Phasing

II.5.4.1.11.1 Project Trip Generation

The following is a description of the proposed and adopted project trip generation calculations.

Proposed Project

SANDAG trip generation rates were utilized to determine the amount of traffic Village 7 would generate. Table C.8 was prepared by LL&G and provides the projected trip generation for the Otay Ranch Village 7 area. The trip generation for the Otay Ranch Village 7 area was calculated to generate a total of 25,079 ADT, 3,133 trips (1,629 inbound and 1,504 outbound trips) in the AM peak hour and 2,482 trips (1,442 inbound and 1,039 outbound trips) in the PM peak hour. The actual trip generation for the Otay Ranch Village 7 SPA is less than what Table C.8 indicates. The Village 7 SPA Plan has 756 Single Family dwelling units, 448 Multi-Family dwelling units, High School, Elementary School, Public Park, 2.8 CPF acres.

Table C.8
Otay Ranch Village 7 Trip Generation

Land Use	Quantity	Daily Trip Ends (ADT)[1]		AM Peak Hour					PM Peak Hour				
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
		Rate[2]	Volume			In	Out	Total			In	Out	Total
Single Family	1,053 DU	10/DU	10,530	8%	3:7	253	590	842	10%	7:3	737	316	1,053
Multi Family	448 DU	8/DU	3,584	8%	2:8	57	229	287	10%	7:3	251	108	358
Com'l	3.7 Ac.	700 /Ac.	2,590	4%	6:4	62	41	104	10%	5:5	130	130	259
Public Park	7.6 Ac.	5 /Ac.	38	4%	5:5	1	1	2	8%	5:5	2	2	3
CPF	4.1 Ac.	30 /Ac.	123	4%	5:5	2	2	5	8%	5:5	5	5	10
Elem. School	11.1 Ac.	90 /Ac.	999	32%	6:4	192	128	320	9%	4:6	36	54	90
Middle School	26.3 Ac.	50 /Ac.	1,315	30%	6:4	237	158	395	9%	4:6	47	71	118
High School	2,950 Pupils	2.00 /Pupil	5,900	20%	7:3	825	355	1,180	10%	4:6	235	355	590
Open Space[3]	61.8 Ac.												
Total Project			**25,079**			**1,629**	**1,504**	**3,133**			**1,442**	**1,039**	**2,482**

Source: LL&G

Notes:
1. Trip-ends are one-way traffic movements, either entering or leaving.
2. Generation rates obtained from the SANDAG Brief Guide (April 2002).
3. Does not generate any trips.

The total internal and net ADT and peak hour trips generated for the proposed project are shown in Table C.9. LL&G assumed that 15% of the residential trips would be internal. The project was calculated to add 20,845 ADT with 2,795 trips in the AM peak hour and 2,058 trips in the PM peak hour to the external street system.

Table C.9
Otay Ranch Village 7 Internal Trips

Land Use	Total Daily Trips			% of Trips which are internal	Internal Trips (Daily)			External Trips (Daily)		
	Daily	AM Peak Hour	PM Peak Hour		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
RESIDENTIAL										
Single Family	10,530	842	1,053	15%	1,580	126	158	8,951	716	895
Multi Family	3,584	287	358	15%	538	43	54	3,046	244	305
Subtotal Residential	**14,114**	**1,129**	**1,411**		**2,117**	**169**	**212**	**11,997**	**960**	**1,200**
NON-RESIDENTIAL										
Commercial	2,590.	104	259	15%	389	10	39	2,202	94	220
Public Park	38	2	3	65%	25	1	2	13	1	1
CPF	123	5	10	75%	92	4	7	31	1	2
Elem. School	999	320	90	53%	529	70	48	470	250	42
Middle School	1,315	395	118	15%	197	24	18	1,118	371	101
High School	5,900	1,180	590	15%	885	60	98	5,015	1,120	492
Open Space [3]										
Subtotal Non-Residential	**10,965**	**2,004**	**1,070**		**2,117**	**169**	**212**	**8,848**	**1,836**	**859**
Total Project	**25,079**	**3,133**	**2,482**		**4,234**			**20,845**	**2,795**	**2,058**

Source: LL&G

Notes:
1. Trip-ends are one-way traffic movements, either entering or leaving.
2. Generation rates obtained from the SANDAG Brief Guide (April 2002).
3. Does not generate any trips.

Phasing Reconciliation

The phasing presented in the SPA Plan is non-sequential and is consistent with the construction phasing contained in the SPA plan. Table C.10 was prepared by LL&G and calculates the projected EDUs and trips generated in 5-year increments or phases. This table also calculates the projected land use and the cumulative trips for Village 7. The circulation system addressed and recommended in the Traffic Impact Analysis includes all improvements based on average daily trips (ADT) and the trigger points for needed improvements.

Table C.10
Otay Ranch Village 7
Trip Generation by Phase

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
		Rate	Volume			In	Out	Total			In	Out	Total
Phase 1 (Year 2005)													
High School	2,950 Pupils	2.00 /Pupil	5,900	20%	7:3	825	355	1,180	10%	4:6	235	355	590
Total Phase 1			**5,900**			**825**	**355**	**1,180**			**235**	**355**	**590**
Phase 2 (Year 2010)													
Single Family	675 DU	10/DU	6,750	8%	3:7	162	378	540	10%	7:3	473	316	1,053
Multi Family	448 DU	8/DU	3,584	8%	2:8	57	229	287	10%	7:3	251	108	358
Commercial	3.7 Ac.	700 /Ac.	2,590	4%	6:4	62	41	104	10%	5:5	130	130	259
CPF	4.1 Ac.	30 /Ac.	123	4%	5:5	2	2	5	8%	5:5	5	5	10
High School	2,950 Pupils	2 /Pupil	5,900	20%	7:3	825	355	1,180	10%	4:6	235	355	590
Elem. School	11.1 Ac.	90 /Ac.	999	32%	6:4	192	128	320	9%	4:6	36	54	90
Public Park	7.6 Ac.	5 /Ac.	38	4%	5:5	1	1	2	8%	5:5	2	2	3
Total Phase 2			**19,904**			**1,301**	**1,135**	**2,436**			**1,130**	**855**	**1,985**
External Trips			**16,781**			**1,234**	**951**	**2,184**			**909**	**758**	**1,667**
Phase 3 (Year 2015)													
Single Family	1,053 DU	10/DU	10,530	8%	3:7	253	590	842	10%	7:3	737	316	1,053
Multi Family	448 DU	8/DU	3,584	8%	2:8	57	229	287	10%	7:3	251	108	358
Commercial	3.7 Ac.	700 /Ac.	2,590	4%	6:4	62	41	104	10%	5:5	130	130	259
CPF	4.1 Ac.	30 /Ac.	123	4%	5:5	2	2	5	8%	5:5	5	5	10
High School	2,950 Pupils	2.00 /Pupil	5,900	20%	7:3	825	355	1,180	10%	4:6	235	355	590
Elem. School	11.1 Ac.	90 /Ac.	999	32%	6:4	192	128	320	9%	4:6	36	54	90
Middle School	26.3 Ac.	50 /Ac.	1,315	30%	6:4	237	158	395	9%	4:6	47	71	118
Public Park	7.6 Ac.	5 /Ac.	38	4%	5:5	1	1	2	8%	5:5	2	2	3
Total Phase 3			**25,079**			**1,629**	**1,504**	**3,133**			**1,442**	**1,039**	**2,482**
External Trips			**20,845**			**1,536**	**1,259**	**2,795**			**1,146**	**912**	**2,058**

Source: LL&G

Network Analysis

It was necessary to estimate future traffic volumes for several study years in order to determine if the planned circulation network or system could accommodate these volumes. As previously discussed, the Series 10.0, SANDAG 2030 City/County Forecast Traffic Model was used to estimate these volumes. The traffic model outputs freeway and street segment ADTs. These ADTs were utilized directly as outputted by the model. In addition, it was also necessary to estimate peak hour intersection volumes. The LL&G Traffic Analysis details the methodology to determine future traffic volumes.

The aforementioned 10 Scenarios that were analyzed in the LL&G Traffic Analysis have different assumptions concerning the study area, land use and roadway network. LL&G

developed the scenarios within three basic Development Plan assumptions. A brief description of the three Development Plans with the various scenarios is provided below. The LL&G Traffic Analysis provides a detailed description of the 16 scenarios. The two basic assumptions for the scenarios are:

Development Plan I
In Development Plan I, analysis of all study area intersections and segments were conducted for the Year 2005, 2010, 2015, 2030 and buildout time frames with the proposed project land uses, adopted City of Chula Vista land uses outside Village 7 and adopted City of Chula Vista Circulation Element.

Development Plan II
In Development Plan II, analysis of all study area intersections and segments were conducted for the Year 2005, 2010, 2015, 2030 and buildout time frames with the proposed project land uses, proposed City of Chula Vista land uses outside Village 7 and proposed City of Chula Vista Circulation Element. The proposed land uses represent the "worst case" or highest intensity" land uses.

For the two buildout conditions, the traffic model assumes that the entire City of Chula Vista circulation element and land uses are built and there is no toll on SR-125.

Network Performance Assessment Process
The LL&G Traffic Analysis included the traffic model projections for cumulative development projects. The report also identified the number of daily trips for the phasing of developments on key roadway segments in order to perform the analysis of network performance based on daily segment LOS. This performance evaluation was performed for roadway and freeway segments. A review of peak hour intersection operations was also performed which required the application of peak hour factors to average daily traffic volumes to develop peak hour turning movements at each of the key project intersections.

11.5.4.1.11.2 Project Phasing

Residential Threshold
LL&G conducted an analysis to determine approximately how many units within Village 7 could be built before access to La Media Road would be needed. LL&G assumed that access would initially be provided via only Magdalena Drive to Birch Road and the next access to be provided would be to La Media Road. Other assumptions that were necessary to conduct the analysis are listed below:

- SR 125 is completed with an interchange at Birch Road but not at Rock Mountain Road.
- High School with 2,950 students is built (trip generation rate of 2.0 ADT/student).
- Rock Mountain Road does not extend east or west of the site.
- Roadway connection to the EUC is not yet provided.
- Connection to La Media is needed once the northbound left-turn volume at the Birch Road/Magdalena Avenue intersection reaches 600 vehicles per hour (vph) or the eastbound right-turn volume, reaches 400 vph based on City standards.
- 60% of northbound residential traffic on Magdalena Avenue turns left.
- One half of the commercial area is developed and middle school and elementary school are not built.

- Assume each dwelling unit generates 9 ADT, 0.54 AM outbound trips (9 ADT*8% during AM peak * 75% of AM trips are outbound) and 0.18 inbound trips.

The large amount of high school AM inbound traffic, the AM eastbound right-turn is expected to "reach capacity" first.

Based on Table C.8, the high school generates 825 AM inbound trips and all these trips must use the Birch Road/Magdalena Avenue intersection (once residential units are built within Village 7, it could be assumed that 15% of these trips remain within Village 7 and the number of inbound trips using the Birch Road/Magdalena Avenue intersection would be 700 vph).

Assuming 60% of the 825 trips are oriented to/from the west, the AM peak hour eastbound right-turn volume would be 495 vph and with one half of the commercial traffic added in, 517 vph. Since these volumes exceed 400 vph (the capacity of a right-turn lane), access to La Media Road is required with the first residential building permit.

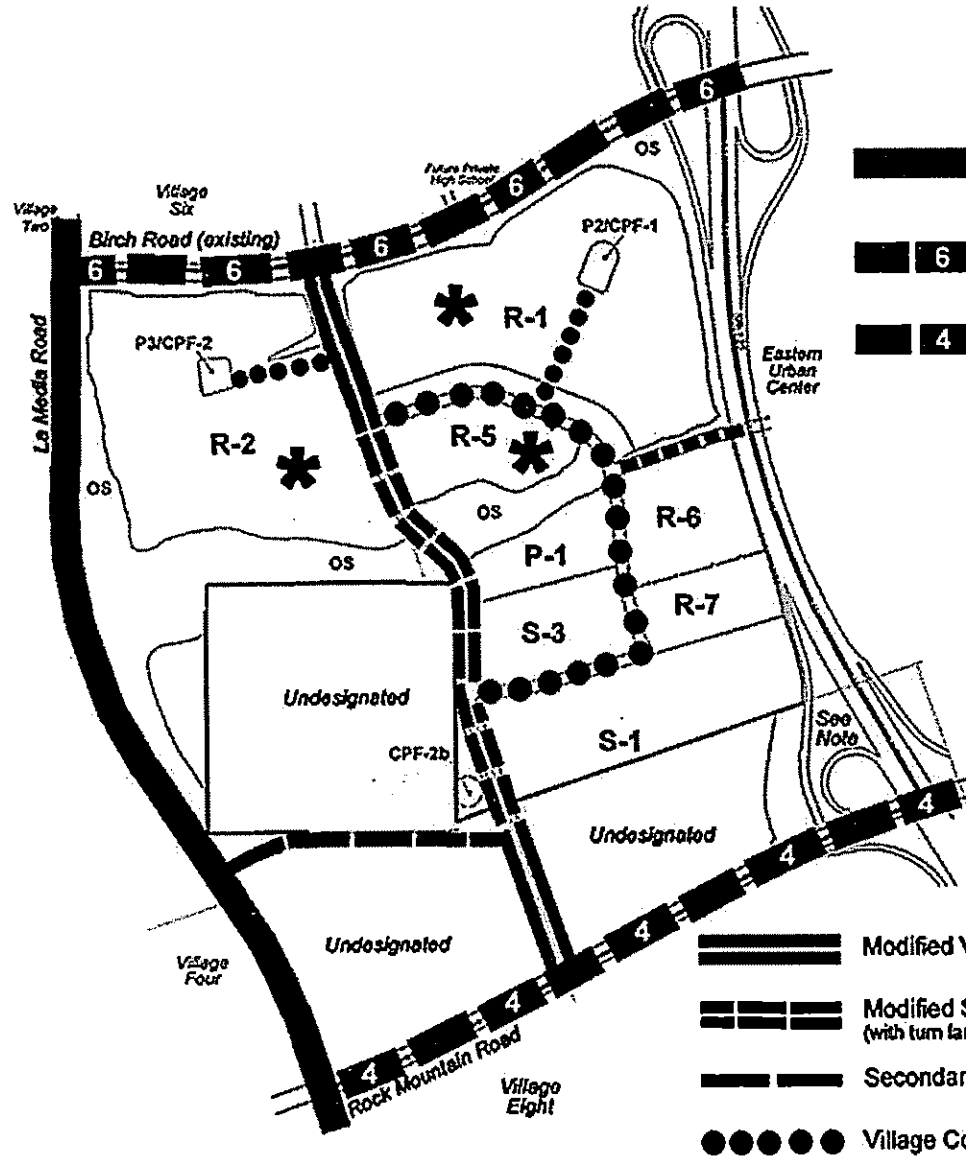
High School Only Threshold

The Birch Road/Magdalena intersection can accommodate all high school traffic until Birch Road is connected between La Media Road and Eastlake Parkway (or SR 125) since there would be virtually no cross traffic on Birch Road. Once Birch Road is connected, there will be cross traffic on Birch Road, which would make eastbound right-turns and the northbound left-turn volumes exceed City standards. Assuming cross traffic on Birch Road a high school of 1,475 students would generate over 400 AM peak hour eastbound right-turn vehicles at the Birch Road/Magdalena Avenue intersection. In summary, the high school would need access to La Media Road if over 1,475 students are desired and Birch Road is connected between La Media Road and Eastlake Parkway (or SR 125).

There is not a traffic demand justification for Rock Mountain Road assuming access to Birch Road, La Media Road and to the EUC are all provided.

Subsection C of the Municipal Code 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 the City of Chula Vista, the city may require amendment, modification, suspension or termination of an approved PFFP.

Circulation



Six Lane Prime Arterial

Six Lane Major Street

Four lane Major Street

Modified Village Entry (with Median)

Modified Secondary Village Entry Street (with turn lane)

Secondary Village Entry Street

Village Core Promenade

Modified Secondary Village Entry (at SR-125 undercrossing)

Residential Promenade Street

Residential Streets & Cul-de-Sacs (location determined at SPA or TM)

Note:
The configuration of the interchange ramps shown on this exhibit is illustrative only and does not preclude alternative configurations.

CITY OF CHULA VISTA

Vista Verde

Village Seven - Otay Ranch

Civil Land Planning

9/2/04

Exhibit 8

II.5.4.1.12 Adequacy Analysis

The City of Chula Vista created the Guidelines For Traffic Impact Studies in February 2001. This document establishes written guidelines for identification of project traffic impacts in Environmental Impact Report documents. Prior to the establishment of the guidelines, the City of Chula Vista hired BRW to review criteria that was being utilized by the City of San Diego and traffic impact study guidelines recommended by the San Diego Traffic Engineer's Council (SANTEC) / Institute of Transportation Engineers (ITE). The objective was to determine the applicability of these standards to developments and facilities within the City of Chula Vista, and develop a specific set of standards for the City of Chula Vista based on this review. The City of San Diego and SANTEC/ITE standards were used to reevaluate several completed studies in the City of Chula Vista to determine potential changes in the identification of project impacts. Results of this evaluation were communicated to the City of Chula Vista department heads and staff through a series of workshops. Discussions, comments and recommendations precipitated from these workshops provided the foundation for the guidelines.

The guidelines provide written criteria for determining the need and scope of traffic studies and identifying impacts. The use of these guidelines ensures uniformity in the preparation and review of traffic studies for developments within the City of Chula Vista. In addition, the guidelines help determine timelines for the implementation of specific improvements to address identified deficiencies.

A. DETERMINING WHEN A STUDY IS NEEDED

In conformance with requirements of the Congestion Management Program (CMP), an analysis of CMP freeways and arterials will be required for any project that generates 2,400 daily, or 200 peak hour trips (As detailed in the 1991 CMP).

For those developments that do not satisfy the requirements for a CMP analysis, a traffic study may be required based on direction provided by the City Engineer and the Environmental Review Coordinator.

B. METHODOLOGY

1. **Study Area Definition**
   a. Volume Thresholds for Study of CMP Freeway Facilities: All freeway segments are by definition included in the CMP network. All freeway mainline segments to which the proposed project will add 2400 total trips (Average Daily Trips or ADT) or 150 or more peak hour trips in either direction must be analyzed.
   b. Volume Thresholds for Study of CMP Arterial Facilities: All CMP arterial segments, including Regionally Significant Arterials (RSA) and other CMP arterial segments and intersections (including freeway on/off ramp intersections), to which the proposed project will add 800 or more total trips (ADT) or 50 or more peak hour trips in either direction must be analyzed.
   c. Volume Thresholds for Local Roadways and Intersections: Traffic studies will be required to review those local and collector roadway facilities that are not included in the CMP network based on direction provided by the City Engineer.

2. **Analysis Scenarios**
Each of the study area freeway segments, roadway segments, and intersections must be analyzed for the following scenarios:

a. Existing Conditions
b. Existing Conditions + Proposed Project
c. Existing Conditions + Approved and Pending Projects + Proposed Project (Only for non-master planned projects)
d. Horizon Years (Usually defined as five-year incremental study years for project, i.e. 2005, 2010, 2015, & 2020. However, final determination on years to be studied may vary based on direction of the City Engineer)
e. Regional Buildout Year + Proposed Project

Additional scenarios may be required depending on the size and phasing of any proposed development. For each analyzed scenario, peak hour analysis will include the AM and PM peaks. At the direction of the City Engineer, special studies of midday peak or other off-peak periods may be required.

3. **Growth Management Oversight Committee (GMOC) Near-Term Analysis**
As determined by the City Engineer, analysis of roadway segments under near-term conditions (Years 0-4) may be conducted using the methodology described in Chapter 11 (Arterial Streets) of the most recent version of the Highway Capacity Manual, which determines segment level of service based on speed, as detailed in the Significance Criteria below. Classification of facilities and definition of segment lengths must be consistent with the City's current Growth Management Traffic Monitoring Program. The Threshold Standard for these arterial analyses requires the maintenance of LOS C or better as measured by average travel speeds except that LOS D can occur for no more than any two hours of the day. Thus, if LOS D conditions are determined for any period of two (2) hours, additional analysis may be required along these high volume segments based on direction provided by the City Engineer.

For planned arterial facilities that are not currently included in the current Traffic Monitoring Program, the definition of segment length and facility classification will be based on direction provided by the City Engineer.

C. SIGNIFICANCE CRITERIA

Project impacts will be defined as either project specific impacts or cumulative impacts. Project specific impacts are those impacts for which the addition of project trips result in an identifiable degradation in LOS on freeway segments, roadway segments, or intersections, triggering the need for specific project-related improvement strategies. Cumulative impacts are those in which the project trips contribute to a poor level of service, at a nominal level.

Study horizon year as used herein is intended to describe a future period of time in the traffic studies, which corresponds to Sandag's traffic model years, and are meant to synchronize study impacts to be in line with typical study years of 2005, 2010, 2015 and 2020.

Criteria for determining whether the project results in either project specific or cumulative impacts on freeway segments, roadway segments, or intersections are as follows:

1. **Short-term (Study Horizon Year 0 to 4)**
   For purposes of the short-term analysis roadway sections may be defined as either links or segments. A link is typically that section of roadway between two adjacent Circulation Element intersections and a segment is defined as that combination of contiguous links used in the Growth Management Plan Traffic Monitoring Program. Analysis of roadway links under short-term conditions may require a more detailed analysis using the GMOC methodology if the typical planning analysis using volume to capacity ratios on an individual link indicates a potential impact to that link. The GMOC analysis uses the Highway Capacity Manual (HCM) methodology of average travel speed based on actual measurements on the segments as listed in the Growth Management Plan Traffic Monitoring Program.
   a. Intersections
      1. Project specific impact if both the following criteria are met:
         a) LOS E or LOS F.
         b) Project trips comprise 5% or more of entering volume.
      2. Cumulative impact if only (i) above is met.
   b. Street Links/Segments
      If the planning analysis using the volume to capacity ratio indicates LOS C or better, there is no impact. If the planning analysis indicates LOS D, E or F, the GMOC method should be utilized. The following criteria would then be utilized.
      1. Project specific impact if all the following criteria are met:
         a) LOS D for more than 2 hours or LOS E/F for 1 hour
         b) Project trips comprise 5% or more of segment volume.
         c) Project adds greater than 800 ADT to the segment.
      2. Cumulative impact if only (i) above is met.
   c. Freeways
      1. Project specific impact if both the following criteria are met:
         a) Freeway segment LOS is LOS E or LOS F
         b). Project comprises 5% or more of the total forecasted ADT on that freeway segment.
   b. Cumulative impact if only (i) above is met.

2. **Long-term (Study Horizon Year 5 and later)**
   a. Intersections
      1. Project specific impact if both the following criteria are met:
         a) Level of service is LOS E or LOS F.
         b) Project trips comprise 5% or more of entering volume.
      2. Cumulative impact if only (i) above is met.
   b. Street Segments
      Use the planning analysis using the volume to capacity ratio methodology only. The GMOC analysis methodology is not applicable beyond a four-year horizon.

1. Project specific impact if all three of the following criteria are met:
   a) Level of service is LOS D, LOS E, or LOS F.
   b) Project trips comprise 5% or more of total segment volume.
   c) Project adds greater than 800 ADT to the segment.
2. Cumulative impact if only (i) above is met. However, if the intersections along a LOS D or LOS E segment all operate at LOS D or better, the segment impact is considered not significant since intersection analysis is more indicative of actual roadway system operations than street segment analysis. If segment Level of Service is LOS F, impact is significant regardless of intersection LOS.
4. Notwithstanding the foregoing, if the impact identified in paragraph a. above occurs at study horizon year 10 or later, and is offsite and not adjacent to the project, the impact is considered cumulative. Study year 10 may be that typical SANDAG model year which is between 8 and 13 years in the future. In this case of a traffic study being performed in the period of 2000 to 2002, because the typical model will only evaluate traffic at years divisible by 5 (i.e. 2005, 2010, 2015 and 2020) study horizon year 10 would correspond to the Sandag model for year 2010 and would be 8 years in the future. If the model year were less than 7 years in the future, study horizon year 10 would be 13 years in the future.
5. In the event a direct identified project specific impact in paragraph a. above occurs at study horizon year 5 or earlier and the impact is offsite and not adjacent to this project, but the property immediately adjacent to the identified project specific impact is also proposed to be developed in approximately the same time frame, an additional analysis may be required to determine whether or not the identified project specific impact would still occur if the development of the adjacent property does not take place. If the additional analysis concludes that the identified project specific impact is no longer a direct impact, then the impact shall be considered cumulative.

c. Freeways
   1. Project specific impact if both the following criteria are met:
      a) Freeway segment LOS is LOS E or LOS F
      b) Project comprises 5% or more of the total forecasted ADT on that freeway segment.
   2. Cumulative impact if only (i) above is met.

II.5.4.1.13 Cost & Financing Traffic Improvements

A. Street Improvements

The following table summarizes the Otay Ranch Village 7 SPA major Street improvements as it relates to Otay Ranch Village 7 development phasing based on the project LL&G Traffic Analysis dated May 20, 2004.

Table C.11
Village 7 Traffic Improvement Phasing and Costs
Public facilities required to be constructed by Village 7[6]

Facility [7]	Description[8]	Estimated Roadway Costs
1	Magdalena Ave. from Birch Rd. to Rock Mtn	$4,500,000
2*	La Media Road from Birch Road to Street C	$5,000,000
2a	Street C from La Media to Magdalena Avenue	$1,600,000

* TDIF Streets

B. Transportation Development Impact Fee (TDIF)

The Otay Ranch Village 7 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.11 will be required to be constructed according to the approved phasing plan. In this case, the DIF 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 DIF fees as indicated below, the owner/developer may be given credits toward future building permits outside of the SPA area. Table C.12 provides a breakdown of the proposed SPA phasing of dwelling units and CPF acres for the TDIF.

Table C.12
Otay Ranch Village 7 SPA
Phasing DUs & Acres for Transportation Facilities

Land Use	DU's	Acres	Phasing								Totals	
			White		Blue		Red		Green			
			DUs	Ac.	DUs	Ac.	DUs	Ac.	DUs	Ac.	DUs	Ac.
Low Density	745	N/A	0	N/A	346	N/A	375	N/A	35	N/A	756	N/A
Medium Density	448	N/A	0	N/A	448	N/A	0	N/A	0	N/A	448	N/A
Commercial	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A	0
CPF	N/A	2.8	N/A	0	N/A	1.1	N/A	0.7	N/A	1.0	N/A	2.8
Total	**1,193**	**2.8**	**0**	**0**	**794**	**1.1**	**375**	**0.7**	**1,19**	**1.0**	**1,204**	**2.8**

[6] Developer shall agree to construct and to secure the facility prior to the Final map triggers the facility as defined in the Threshold Compliance and Recommendations section.

[7] The Developer will be required to process a Joint Use Agreement with the City of Chula Vista and any Agency for streets that cross existing easements.

[8] All intersections will be constructed with traffic signals.

The TDIF was last updated by City Council Ordinance 2887 in November 19, 2002. This amount is subject to change as it is amended from time to time. Single Family Detached Dwellings at a density of less than eight Dwelling Units (DU) per gross acre are considered Low Density Residential Developments by the City's Master Fee Schedule. The current TDIF is $8,180 per Equivalent Dwelling Unit (EDU). Low Density Residential (<8 DU/gross acre) are charged one EDU/DU or $8,180/DU. Single Family Attached Dwellings at a density of greater than eight up to twenty DUs/gross acre are considered Medium Density Residential Developments. Medium Density Residential (>8-20 DU/gross acre) are charged .8 EDU/DU or $6,544.00/DU. Multi-Family Dwellings at a density of greater than twenty DUs per gross acre are considered High Density Residential Developments. High Density Residential (>20 DU/gross acre) are charged .6 EDU/DU or $4,908.00/DU. General Commercial shall be charged at the rate of $171,780.00 per acre of land. Under the proposed Otay Ranch Village 7 SPA Plan, the total Fee by Phase for Transportation Facilities is estimated at $9,238,376 (see Table C.13).

Table C.13
Otay Ranch Village 7 SPA
TDIF Fees

Phase	Low Density Units	Fee $8,290/DU	Med Density Units	Fee $6,632/DU	Total
White	0	$0	0	$0	$0
Blue	346	$2,868,340	448	$2,971,136	$5,839,476
Red	375	$3,108,750	0	$0	$3,108,750
Green	35	$290,150	0	$0	$290,150
Total	**756**	$6,267,240	**448**	$2,971,136	$9,238,376

The current Interim SR-125 Development Impact Fee is $820 per Equivalent Dwelling Unit (EDU), which may be amended from time to time. Each new single-family detached dwelling shall be considered one EDU for the purposes of this fee. A single-family attached dwelling shall be 0.8 EDUs. A unit within a multi-family dwelling shall be considered 0.6 EDUs. General Commercial shall be charged at the rate of $20,500.00 per acre of land. Under the proposed Otay Ranch Village 7 SPA Plan, the total Fee by Phase for Interim SR-125 Facilities is estimated at $913,808 (see Table C.14).

Table C.14
Otay Ranch Village 7 Interim SR-125 DIF Fees

Development Phase	Single Family Detached Units	EDUs	Single Family Attached Units	EDUs	Total EDUs	SR-125 Fee @ $820/EDU Total
White	0	$0	0	$0	0	$0
Blue	346	$283,720	448	$293,888	794	$577,608
Red	375	$307,500	0	$0	375	$307,500
Green	35	$28,700	0	$0	35	$28,700
Total	**756**	$619,920	**448**	$293,888	**1,204**	$913,808

C. **Traffic Signal Fee**

Future development within Otay Ranch Village 7 will be required to pay Traffic Signal Fees in accordance with Chula Vista Council Policy No. 475-01. The estimated fee is calculated at $24.00 per vehicle trip generated per day for various land use categories (see Table C.15).

Table C.15
Otay Ranch Village 7 Traffic Signal Fees[9]

Development Phase	Trips	Traffic Signal Fee @ $24/Trip
White	5,900*	$141,600
Blue	8,114	$194,736
Red	3,771	$90,504
Green	380	$9,120
Total	**18,165**	**$435,960**

* High School site.

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

Otay Ranch Village 7 contains internal public streets and signals that by city policy, are not eligible for DIF credit. These streets and signals will be funded by the development.

II.5.4.1.14 Threshold Compliance and Requirements

A. Otay Ranch Village 7 shall be conditioned to pay TDIF Fees and Interim SR-125 DIF Fees at the rate in effect at the time building permits are issued.

B. The measures outlined in Table 25 of the LL&G Traffic Impact Analysis dated April 13, 2004 are required to mitigate cumulative and direct project impacts. This table is included as Table 16 of this PFFP.

C. Developer shall secure and enter into an agreement to construct La Media and Street "C" prior to the first final map. Developer shall further agree to complete the construction of La Media and Street "C" prior to the issuance of the first residential building permit for the project. Notwithstanding the foregoing, the City of Chula Vista may issue additional residential permits, as determined in the sole discretion of the City Engineer, but in no event exceed 350 residential permits, if the developer can demonstrate that the following conditions have been met:

1) The applicant shall provide evidence that actual enrollment in the High School located in Village 7 is less than or equal to 1600 students; and

2) The applicant shall submit a traffic study that demonstrates that the intersection of Birch Road and Magdalena Avenue will meet both Level of Service and design standards criteria; and

3) The applicant shall provide evidence that grading operations for La Media and Street "C" are substantially completed and roadway improvements for both La Media and Street "C" are adequately progressing toward completion.

D. If the Village 7 High School project is approved by the State of California and grading permit is issued for the high school site, or the high school is under construction, the half-width right of way for Rock Mountain Road and the full-width of Magdalena Avenue along the frontage of the High School site shall be dedicated prior to the approval of the first final map. Said dedications shall include landscape buffer easements and temporary

[9] Table is provided as an estimate only. Fees may change depending upon the actual number of dwelling units.

grading and construction easements to the satisfaction of the City Engineer.

E. Prior to the approval of the first final map which triggers the installation of the related street improvements, the developer of the Otay Ranch Village 7 project shall enter into an agreement to secure and construct a fully activated traffic signal including interconnected wiring at the following intersections:

   1) Magdalena Avenue and Birch Street.
   2) Street C and Magdalena Avenue.
   3) Street C and La Media.
   4) Rock Mountain and Magdalena Avenue.

F. The developer of Otay Ranch Village 7 shall fully design the aforementioned traffic signals as part of the improvement plans for the related intersections. Developer shall install underground improvements, standard and luminaries in conjunction with the construction of the related street improvements. In addition, developer shall install mast arms, signal heads, and associated equipment with traffic signal warrants as determined by the City Engineer.

G. Left-turn storage lengths and the right-turn deceleration lengths at all proposed intersections shall be provided in accordance with the recommendations of the LL&G Traffic Impact Analysis dated April 13, 2004.

Table C.16 Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
A. DIRECT IMPACTS		
SCENARIO 1 - YEAR 2005 WITHOUT SR 125		
None	None	None
SCENARIO 2 - YEAR 2010		
None	None	None
SCENARIO 3 - YEAR 2015		
None	None	None
SCENARIO 4 - YEAR 2030		
None	None	None
SCENARIO 5 - BUILDOUT		
None	None	None
SCENARIO 6 - YEAR 2005 WITHOUT SR 125		
None	None	None
SCENARIO 7 - YEAR 2010		
None	None	None
SCENARIO 8 - YEAR 2015		
None	None	None
SCENARIO 9 - YEAR 2030		
35. Rock Mountain Rd./La Media Rd. Rock Mountain Rd. from La Media Rd. to SR 125	Widen Rock Mountain Road to a 6-Ln Major Road with the appropriate intersection geometry per City of Chula Vista Standards. This will require a General Plan Amendment. Widen Rock Mountain Road to a 6-Ln Prime Arterial with the appropriate intersection geometry per City of Chula Vista Standards. Prior to 2030, the applicant shall pay a fair share toward the construction of the six-lane segment of Rock Mountain Road between La Media and SR 125, or shall construct the road segment. This will require a General Plan Amendment.	LOS D (AM & PM) LOS C

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
A. DIRECT IMPACTS (CONTINUED)		
SCENARIO 10 – BUILDOUT		
35. Rock Mountain Rd./La Media Rd.	Widen Rock Mountain Road to a 6-Ln Major Road with the appropriate intersection geometry per City of Chula Vista Standards. This will require a General Plan Amendment.	LOS D (AM & PM)
Rock Mountain Rd. from La Media Rd. to SR 125	Widen Rock Mountain Road to a 6-Ln Prime Arterial with the appropriate intersection geometry per City of Chula Vista Standards. Prior to 2030, the applicant shall pay a fair share toward the construction of the six-lane segment of Rock Mountain Road between La Media and SR 125, or shall construct the road segment. This will require a General Plan Amendment.	LOS C
B. CUMULATIVE IMPACTS		
SCENARIO 1 - YEAR 2005 WITHOUT SR 125		
1. Telegraph Cnyn. Rd./I-805 SB Ramps	No units within Village 7 shall be constructed which would result in the total number of units within the eastern territories (starting on January 1, 2003), exceeding 8,990 units, prior to the construction of SR 125 between SR 54 and the International border.	NA
Telegraph Cnyn. Rd. from I-805 to Oleander Ave.	No units within Village 7 shall be constructed which would result in the total number of units within the eastern territories (starting on January 1, 2003), exceeding 8,990 units, prior to the construction of SR 125 between SR 54 and the International border.	NA
SCENARIO 2 - YEAR 2010		
None	None	None
SCENARIO 3 - YEAR 2015		
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 7-Ln Major Street standards. This will require a General Plan Amendment.	LOS C
SCENARIO 4 - YEAR 2030		
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 7-Ln Major Street standards. This will require a General Plan Amendment.	LOS B
SCENARIO 5 – BUILDOUT		
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 7-Ln Major Street standards. This will require a General Plan Amendment.	LOS C

Note: NA - Not applicable since the impact is not mitigated prior to SR 125.

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
B. CUMULATIVE IMPACTS (CONTINUED)		
SCENARIO 6 – YEAR 2005 WITHOUT SR 125		
1. Telegraph Cnyn. Rd./I-805 SB Ramps	No units within Village 7 shall be constructed which would result in the total number of units within the eastern territories (starting on January 1, 2003), exceeding 8,990 units, prior to the construction of SR 125 between SR 54 and the International border.	NA
Telegraph Cnyn. Rd. from I-805 to Oleander Ave.	No units within Village 7 shall be constructed which would result in the total number of units within the eastern territories (starting on January 1, 2003), exceeding 8,990 units, prior to the construction of SR 125 between SR 54 and the International border.	NA
SCENARIO 7 - YEAR 2010		
None	None	None
SCENARIO 8 - YEAR 2015		
Rock Mountain Road from Main St. to La Media Rd.	Contribute fairshare towards widening of Rock Mountain Road to a 4-Ln Major Street standards. This will require a General Plan Amendment.	LOS C
Rock Mountain Road from La Media Rd. to SR 125	Contribute fairshare towards widening of Rock Mountain Road to a 6-Ln Major Street standards. This will require a General Plan Amendment.	LOS C
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 6-Ln Prime Arterial standards. This will require a General Plan Amendment.	LOS C
SCENARIO 9 - YEAR 2030		
35. Rock Mountain Rd./La Media Rd.	Contribute fairshare towards widening of Rock Mountain Road to a 6-Ln Prime Arterial standards with the appropriate intersection geometry per City of Chula Vista Standards. This will require a General Plan Amendment.	LOS D during the AM and PM peak hours
Rock Mountain Road from Main St. to La Media Rd.	Contribute fairshare towards widening of Rock Mountain Road to a 6-Ln Major Street standards. This will require a General Plan Amendment.	LOS C
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 8-Ln Prime Arterial standards. This will require a General Plan Amendment.	LOS C

Note: NA - Not applicable since the impact is not mitigated prior to SR 125.

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
B. CUMULATIVE IMPACTS (CONTINUED)		
SCENARIO 10 – BUILDOUT		
Rock Mountain Road from SR 125 to Eastlake Pkwy.	Contribute fairshare towards widening of Rock Mountain Road to a 8-Ln Prime Arterial standards. This will require a General Plan Amendment	LOS C
C. FREEWAYS		
SCENARIO 1 - YEAR 2005 WITHOUT SR 125		
None	None	None
SCENARIO 2 - YEAR 2010		
None	None	None
SCENARIO 3 - YEAR 2015		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA
SCENARIO 4 - YEAR 2030		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Telegraph Cnyn. Rd. to Olympic Pkwy.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
C. FREEWAYS (CONTINUED)		
SCENARIO 5 - YEAR 2030		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Telegraph Cnyn. Rd. to Olympic Pkwy.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA
SCENARIO 6 - YEAR 2005 WITHOUT SR 125		
None	None	None
SCENARIO 7 - YEAR 2010		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SCENARIO 8 - YEAR 2015		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
C. FREEWAYS (CONTINUED)		
SCENARIO 9 - YEAR 2030		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
NB I-805 from Olympic Pkwy. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Telegraph Cnyn. Rd. to Olympic Pkwy.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA
SCENARIO 10 - BUILDOUT		
NB I-805 from Telegraph Cnyn. Rd. to East "H" St.	Additional lanes would be required to maintain acceptable LOS. Continued freeway planning efforts and deficiency planning by Caltrans and SANDAG will determine mitigation strategies for the regional freeway system.	NA
SB I-805 from East "H" St. to Telegraph Cnyn. Rd.	Same as above.	NA
SB I-805 from Telegraph Cnyn. Rd. to Olympic Pkwy.	Same as above.	NA
NB I-805 from Main St. to Olympic Pkwy.	Same as above.	NA
SB I-805 from Olympic Pkwy. to Main St.	Same as above.	NA

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures		
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**	**BUILDOUT LOS WITH MITIGATION**
D. PROJECT ACCESS		
44. Magdelena Ave./Birch Rd.	Phasing of the following improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer, with intersection lane geometry per Figure 38 of the LL&G report. Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaires at the Magdelena Avenue/Birch Road intersection. The design of the signal shall be to the satisfaction of the City Engineer. The applicant shall provide turn lane storage lengths as listed in Table 22 of the LL&G report.	LOS C or better
45. Magdelena Ave./Rock Mountain Rd.	Phasing of the following improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer, with intersection lane geometry per Figure 38 of the LL&G report. Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaires at the Magdelena Avenue/ Rock Mountain Road intersection. The design of the signal shall be to the satisfaction of the City Engineer. The applicant shall provide turn lane storage lengths as listed in Table 22 of the LL&G report.	LOS C or better
46. Street "C"/La Media Rd.	Phasing of the following improvements shall be consistent with the project PFFP and to the satisfaction of the City Engineer, with intersection lane geometry per Figure 38 of the LL&G report. Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaires at the Street "C"/La Media Road intersection. The design of the signal shall be to the satisfaction of the City Engineer. The applicant shall provide turn lane storage lengths as listed in Table 22 of the LL&G report.	LOS C or better

Table C.16 Continued Village 7 SPA Significant Impacts and Mitigation Measures	
SIGNIFICANT IMPACTS	**MITIGATION MEASURES**
E. INTERNAL CIRCULATION (INTERSECTION TRAFFIC CONTROL)	
Magdalena Avenue/Street "J"	Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure All-way STOP control at the Magdalena Avenue/Street "J" intersection.
Magdalena Avenue/Street "D"	Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure All-way STOP control at the Magdalena Avenue/Street "D" intersection.
Magdalena Avenue/MU-1 Access	Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure All-way STOP control at the Magdalena Avenue/MU-1 intersection.
Magdalena Avenue/Street "E"	Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure All-way STOP control at the Magdalena Avenue/Street "E" intersection.
Magdalena Avenue/Street "C"	Prior to issuance of building permits triggering the construction of the intersection improvements, the applicant shall enter into an agreement to design, construct, and secure a fully actuated traffic signal including interconnect wiring, mast arms, signal heads and associated equipment, underground improvements, standards and luminaires at the Magdelena Avenue/Street "C" intersection. The design of the signal shall be to the satisfaction of the City Engineer.

II.5.4.2 POLICE

II.5.4.2.1 Threshold Standard

A. Emergency Response: properly equipped and staffed police units shall respond to 81% of "Priority One" Emergency calls throughout the city within 7 minutes and shall maintain an average response time to all "Priority One" emergency calls of 5.5 minutes or less (measured annually).

B. Urgent Response: Properly equipped and staffed police units shall respond to 57% of "Priority Two" Urgent calls throughout the city within 7 minutes and maintain an average response time to all "Priority Two" calls of 7.5 minutes or less (measured annually).

II.5.4.2.2 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.

II.5.4.2.3 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.

II.5.4.2.4 Existing Conditions

The Chula Vista Police Department (CVPD) provides law enforcement services to the area encompassing the Otay Ranch Village 7 SPA. The CVPD is located in a new headquarters building at the corner 4th Avenue and F Street in Chula Vista. This new facility is expected to be adequate through the build-out of eastern Chula Vista. Currently, CVPD maintains a staff of approximately 221 sworn officers and approximately 103 civilian and support personnel. The Department has been authorized 228 sworn officers and 112 civilian staff. The Department is recruiting new officers and has approximately 15 officers in training. The Otay Ranch Village 7 SPA is within Police Patrol Beat 24 that is served by at least one patrol car 24 hours per day.

Police Facility Inventory

- New Police Headquarters at 4th Avenue and F Street.

II.5.4.2.5 Adequacy Analysis

According to the City's Growth Management Coordinator the response times for "Priority One" and "Priority Two" Calls for Service (CFS) were not met. During the July 2001 to June 2002 time period the Police Department responded to 80% of "Priority One" emergency calls within 7, below the 84% response time threshold. However, the average "Priority One" call response time was 5:07 minutes compared to the 5:30 minute threshold time. The GMOC considered this "Priority One"performance to be in "virtual compliance." Forty five point six percent (45.6%) of "Priority Two" urgent calls were responded to within 7 minutes compared to the 62% threshold. The average "Priority Two" call response time was 10:04 minutes compared to the 7:30 minute threshold time.

According to the GMOC, police response time is just one measure of how these services are keeping pace with growth. The city has implemented measures to improve police response time. These measures range from maintaining full staffing to technological improvements. Response time is recognized as being less than an ideal threshold particularly when it is looked at in isolation. A community attitude survey concerning the quality of police service consistently shows the police receiving high marks. The community is satisfied yet the threshold has failed. The difficulty is defining a threshold measure that reflects some aspect of police service that is directly impacted by growth, and that some corrective action can be taken to correct a failure. Linking a threshold to a crime rate figure is flawed, as crime is often inversely related to growth. That is, in a strong economy accompanied by increased growth, crime rates typically go down. The reverse occurs when the economy is weak. Two measures that do relate to the ability of the Police Department to maintain the quality of life and are growth related are maintaining adequate staffing and reducing false alarms.

The GMOC concluded that it must determine what additional appropriate measures will be necessary to monitor the quality of police service in the face of growth. To this end, the GMOC will investigate establishing a set of "targets" to be monitored. Currently, these "targets" are outside of the parameters as established by the city's Growth Management Ordinance. Monitoring these "targets" may lead to a specific recommendation by the GMOC for their formal inclusion as a threshold measure. This initial investigation period will evaluate the difficulty and cost of providing the information and if the target ultimately proves useful in assessing how the Police Department is responding to growth. The targets are:

- Maintaining the advanced hire program and an effective number of officers relative to the population.
- A decrease in the rate of false alarms, particularly in new developments.

As the table below indicates, the Police Department has made progress in reducing their response time over the past several years. The Police Department is engaged in several current or proposed initiatives to continue the reduction in response times.

Table D.1 Historic Response Times Priority I -- Emergency Response, Calls For Service			
	Call Volume	**% of Call Response within 7 Minutes**	**Average Response Time**
Threshold		81.0%	5:30
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[10]	11,890 of 74,405	70.9%	5:50

Source: City of Chula Vista

The Police Department initiatives include:

- **Dispatch staffed:** The Dispatch section is now fully staffed.
- **Additional police car in East during busy times:** An additional car has been added to the eastern beat.
- **Greater area familiarity:** Team policing has been instituted.
- **Full Staffing:** Due to the implementation of the advance hire program staffing overall is at a record level with 223 positions filled out of 228 (as of 3/31/03).
- **Faster address location:** The Department has upgraded the entire patrol fleet to Mobile Data Computers (MDCs) for mapping capabilities. In-car mapping helps officers ascertain the quickest route to a call location. In addition, these maps can be more easily updated to include new streets in east Chula Vista.
- **Global positioning system:** The Department has GPS hardware for this system, and is currently preparing the software base needed to implement the technology. This technology will integrate GPS in patrol cars with the computer-aided dispatch (CAD) system, which will allow police dispatchers to route the nearest available units to calls for service.
- **Continuing efforts under the Advance Hire program:** Under this initiative, the Department is able to hire five officers over the number authorized. This program takes into account anticipated officer turnover and the lengthy lead-time required to place new officers on the street. This initiative helps ensure that adequate numbers of officers will be available for patrol duties, which in turn, favorably affects response times.

II.5.4.2.6 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 2886 and 2887. The current fee for single family residential development is $5,048/unit, multi-family residential is $4,726/unit, commercial (including office) development is $20,764/acre and industrial development is $3,848/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA project.

[10] The FY98-99 GMOC Report used calendar 1999 data due to the implementation of the new CAD system in mid-1998.

The Otay Ranch Village 7 SPA is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Village 7 SPA Plan Police Fee obligation at buildout is $1,140,944.

Table D.2
Otay Ranch Village 7 SPA
Public Facilities Fees For Police[11]

Development Phase	Dwelling Units		Com'l Acres	Police Fee			
	SF	MF		Single Family $804/DU	Multi-Family $1,190/DU	Com'l $10,356/Ac.	Total Fee
White	0	0	0	$0	$0	$0	$0
Blue	346	448	0	$278,184	$533,120	$0	$811,304
Red	375	0		$301,500	$0	$0	$301,500
Green	35	0	0	$28,140	$0	$0	$28,140
Total	**1,204**		**0**	**$607,824**	**$533,120**	$0	**$1,140,944**

Table D.2 is an estimate of the proposed project. Actual fees 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.

II.5.3.2.7. THRESHOLD COMPLIANCE AND REQUIREMENTS

A. The City will continue to monitor police responses to calls for service in both the Emergency (priority one) and Urgent (priority two) categories and report the results to the GMOC on an annual basis.

B. That the Police Department remain diligent in meeting and achieving shorter response times than what is indicated as the Threshold Standard through the active pursuit and implementation of their current and planned programs and report on how these measures improved response times to next years GMOC.

C. 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, the amount of commercial acres and the amount of industrial acres at the rate in effect the time building permits are issued.

[11] 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.

II.5.4.3 FIRE AND EMERGENCY MEDICAL SERVICES

II.5.4.3.1 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 (current service to be verified) of the cases (measured annually).

II.5.4.3.2 Service Analysis

The City of Chula Vista Fire Department provides Fire and Emergency Medical Services (EMS). EMS is provided on a contract basis with American Medical Response (AMR). The City also has county-wide 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 1997 Fire Station Master Plan, as amended. The Fire Station Master Plan indicates that the number and location of fire stations primarily determine response time. The Fire Station Master Plan evaluates the planning area's fire coverage needs, and recommends a nine (9) station network at build out to maintain compliance with the threshold standard.

II.5.4.3.3 Project Processing Requirements

Developments shall be in accordance with the project guidelines outlined in the Fire Station Master Plan as may be amended from time to time.

In accordance with the Fire Station Master Plan, the City, at its sole discretion, shall determine when a new fire station is required in order to achieve threshold service levels, meet specific project guidelines or maintain general operational needs of the Fire Department.

The requirement to pay for fire station construction and related equipment shall be the sole responsibility of the developer or developers and the City may require said developer or developers to provide a guarantee mechanism to assure the availability of such funding.

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

A. Specific siting of the facility takes place, which conforms to the *Fire Station Master Plan,* August 14, 1997, as amended.
B. Equipment needs identified.
C. Methods of financing discussed.
D. Timing of construction is consistent with threshold service levels, specific project guidelines and/or general operational needs of the Fire Department.
E. Demonstrate the ability to provide adequate facilities to access required fire stations in conjunction with the construction of sewer and water facilities.

II.5.4.3.4 Existing Conditions

There are currently seven (7) city stations and one (1) fire protection district station serving the City of Chula Vista. The existing and future stations are listed below:

Table E.1
Fire Station Inventory

Chula Vista Existing Facilities	**Location**	
Station #1	447 "F" Street	
Station #2	80 East "J" Street	
Station #3	1410 Brandywine	
Station #4 + Fire Training Tower	850 Paseo Ranchero	
Station #5 (Montgomery)	391 Oxford Street	
Interim Station #6	975 Lane Avenue	
Otay Ranch #7	1640 Santa Venetia	
Fire Prevention Bureau	447 "F" Street	
Fire Administration	447 "F" Street	
County Fire Protection District Facility[12]		
Bonita/Sunnyside Fire Protection Dist.	4900 Bonita Road	
Planned Facilities		**Cost Estimate**[13]
Station #5 (to be reconstructed)	391 Oxford Street	$1,200,000
Station #6 (permanent facility)	Rolling Hills Ranch/Mt. Miguel	$1,000,000
EastLake Trails/Woods #8	East H Street/Mt. Miguel Rd.	None Established
Otay Ranch #9	Village 15	None Established
Other Capital Improvements		
Public Safety Communications (CAD/RMS)	Dispatch Center	$4,612,050
Public Safety Communications (800MHz)	Citywide	None Established
Brush Engine	Eastern Territories	$225,000

II.5.4.3.5 Adequacy Analysis

The City of Chula Vista Fire Department (CVFD) currently serves areas within the City's boundaries, including the Otay Ranch Otay Ranch Village 7 SPA. The closest CVFD stations to the project site are:

- Fire Station #3, located in the Sunbow development.
- Fire Station #4, located at 850 Paseo Ranchero.
- Interim Fire Station #6, located in the EastLake Woods.
- Planned Fire Station #8, to be located in the Rolling Hills development.

The station nearest to the Otay Ranch Otay Ranch Village 7 SPA project is the planned Fire Station #7 and will provide first-in coverage to the project.

According to the GMOC 2002 report, times for Emergency Response were not met during the July 2001, to June 2002, period. The Fire Department responded to 69.7% of emergency calls within 7 minutes, compared with the 80% threshold level that had been based on an estimated 1.3 minute dispatch and turnout and 5.7 minute travel time.

[12] The City of Chula Vista has an Automatic Aid Agreement with Bonita/Sunnyside and the cities of National City, Imperial Beach, Coronado and San Diego.

[13] Cost Estimates are approximate figures and subject to refinement by the City of Chula Vista.

This was unexpected as it was anticipated that changing to a new dispatch provider would improve response time. However, increases in dispatch, turn out, and travel time have been experienced. Both east and west Chula Vista have been impacted, although the degree of impact was considerably less in the west.

Table E.2
FIRE/EMS - Emergency Response Times Since 1994

Years	Call Volume	% of All Call Response Win 7:00 Minutes
FY 2001-02	7,626	69.7%
FY 2000-01	7,128	80.8%
FY 1999-00	6,654	79.7%
CY 1999	6,344	77.2%
CY 1998	4,119	81.9%
CY 1997	6,275	82.4%
CY 1996	6,103	79.4%
CY 1995	5,885	80.0%
CY 1994	5,701	81.7%

The basic causes for the decline in performance is that there have been regulatory and procedural changes that result in longer response times. Further, there has been continued growth in the east. It was reported that 79.4% of calls in the west are responded to within 7 minutes compared to 43.7% of the calls in the east. Fire Station 7 in Village 2 is now operational and will assist in improving response times. Station 7 will ultimately have a staff of 21. In addition, Fire Station No. 6 is planned for Rolling Hills Ranch, to be relocated from the temporary location in the Eastlake Business Park. The process to relocate the station will be completed in approximately 1 year. The station has a staff of 3 per shift for a total of 9.

American Medical Response (AMR) provides emergency medical services to the project site, on a contract basis for the City of Chula Vista. There are two AMR stations, which provide paramedic with EMT services to the City of Chula Vista exclusively.

II.5.4.3.6 Financing Fire Service Facilities

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2886 and 2887. The current fee for single family residential development is $5,048/unit, multi-family residential is $4,726/unit and commercial (including office) development is $20,764/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Otay Ranch Village 7 SPA project.

The Otay Ranch Otay Ranch Village 7 SPA is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Otay Ranch Village 7 SPA Plan Fire Fee obligation at buildout is $541,354 (see Table E.3). Table E.3 is 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, industrial acreage or commercial acreages.

Table E.3 Otay Ranch Village 7 SPA Public Facilities Fees For Fire[14]							
Development Phase	Dwelling Units		Com'l Acres	Fire Fee			
	SF	MF		Single Family $450/DU	Multi-Family $448/DU	Com'l $2,245/Ac.	Total Fee
White	0	0	0	$0	$0	$0	$0
Blue	346	448		$155,700	$200,704	$0	$356,404
Red	375	0		$168,750	$0	$0	$168,750
Green	35	0		$15,750	$0	$0	$15,750
Total	**1,204**		**0**	**$340,650**	**$200,704**	**$0**	**$541,354**

II.5.4.3.7 Threshold Compliance and Recommendations

Threshold Compliance

Similar to the Police threshold, response time alone is not a complete measure by which to rate the Fire/EMS Department's response to growth. Other measures should be considered. A set of "targets" has been identified that represent benchmarks in how resources are being allocated to the fire Department in order for them to maintain the threshold. Monitoring these "targets" may lead to a specific recommendation by the GMOC for their formal inclusion as a threshold measure. This initial investigation period will evaluate the difficulty and cost of providing the information and if the target ultimately proves useful in assessing how the City is responding to growth.

The aforementioned disparity in response time from the eastern and the western portions of the city is in large part a function of the relative number and proximity of fire stations to residences and businesses. A potential factor may be community design. Fire Department staff has indicated a concern that relative to the western portion of the city, the new master planned areas are characterized by long circuitous streets, some guarded/gated communities, and in rare cases speed bumps on sections of private road. All of these features are believed to impact response times. The exact magnitude of design features on overall response time averages has not been quantified. Therefore, the significance of "design" in the decline in response times remains uncertain. In any event, the future physical layout of eastern development is now being adjusted to more closely resemble a grid pattern, which may improve response time performance. In addition, the GMOC's position is that the response time standard must be applied equally to both east and west. They have tasked the Fire Department with providing this level of service in an equitable fashion.

Threshold Requirements:

A. The City will continue to monitor fire department responses to emergency fire and medical calls and report the results to the GMOC on an annual basis. The GMOC has recommended that the Fire Department develop targets (i.e. schedules) for the following inputs, to be monitored by the GMOC: (1) timing of Fire Station construction, (2) equipment purchase for these stations, and (3) staff hire relative to growth.

B. The Otay Ranch Otay Ranch Village 7 project shall pay public facilities fees at the rate in effect at the time building permits are issued.

[14] 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.

II.5.4.4 SCHOOLS

II.5.4.4.1 Threshold Standard

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

1. Amount of current capacity now used or committed.
2. Ability to absorb forecasted growth in affected facilities.
3. Evaluation of funding and site availability for projected new facilities.
4. Other relevant information the District(s) desire(s) to communicate to the City and GMOC.

II.5.4.4.2 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 if adequate school funds are available.

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 School Facilities Needs Analysis (SFNA), February, 2003, to quantify, for the next five-year period, the impacts of new residential development on the districts 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 in Village 7, alternative fees or implementation of a Mello-Roos Community Facilities District (CFD) will be necessary.

In compliance with Government Code Section 65995 et. Seq. the SFNA provides the determination of eligibility for and the calculation of a Level II Fee of $1.51 per square foot of new residential construction. A corresponding Level III Fee of $3.04 per square foot of new residential construction is also identified.

SHUSD utilizes their School Facilities Needs Analysis (SFNA), April, 2004, to quantify, for the next five-year period, the impacts of new residential development on the districts 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 in Village 7, alternative fees or implementation of a Mello-Roos Community Facilities District (CFD) will be necessary.

In compliance with Government Code Section 65995 et. Seq. the SFNA provides the determination of eligibility for and the calculation of a Level II Fee of $1.92 per square foot of new residential construction. A corresponding Level III Fee of $3.84 per square foot of new residential construction is also identified.

II.5.4.4.3 Project Processing Requirements

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

1. Identify student generation by phase of development.
2. The siting of proposed school facilities will take place in conformance with the *Sweetwater Union High School District Long Range School Facility Master Plan,* and the Chula Vista Elementary School District's Standards and Criteria.
3. Reserve school sites, if necessary, or coordinate with the district for additional school classrooms.
4. Provide cost estimates for facilities.
5. Identify facilities consistent with proposed phasing.
6. Demonstrate the ability to provide adequate facilities to access public schools in conjunction with the construction of water and sewer facilities.
7. Secure financing.

II.5.4.4.4 Existing Conditions

School Facilities Inventory, Chula Vista Elementary School District

Currently, the CVESD's inventory consists of 37 elementary schools including 6 Charter schools. Table Q lists existing schools together with the capacity and enrollment of each. Capacity using existing buildings is 27,380. Enrollment is currently approximately 25,534. Ten of the 40 schools, Arroyo Vista, Casillas, Cook, Feaster, Heritage, Hilltop, Marshall, McMillin, Olympic View and Rogers are over capacity. Seven of the 40 schools, Castle Park, Chula Vista Hills, Discovery, Finney, Kellogg, Otay, and Rosebank are near capacity (see Table F). Eighteen schools are on a traditional calendar and 22 are on year-round calendar.

New elementary schools will be needed to meet the educational needs of students generated from the projected development and resultant population increase. The district has experienced rapid growth during the past decade. During the period from 1993 to 2002 District enrollment went up by 5,700 students, an increase of 30%. This growth was reportedly due to:

1. Demographic changes in older neighborhoods;
2. New growth in the eastern territories; and

3. Higher student generation ratios (students per household) in some new developments in the east.

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

School	Enrollment 9/19/03	Approximate Capacity	Remaining Capacity
Allen	426	500	74
Arroyo Vista	841	810	-31
Casillas	714	705	-9
Castle Park	575	590	15
Chula Vista Hills	585	600	15
Chula Vista LCC	558	600	42
Clear View	512	580	68
Cook	536	530	-6
Discovery	855	880	25
EastLake	621	740	119
Feaster	1124	1050	-74
Finney	525	540	15
Halecrest	503	570	67
Harborside	747	840	93
Hedenkamp	572	1000	428
Heritage	895	790	-105
Hilltop Drive	561	540	-21
Juarez-Lincoln	686	750	64
Kellogg	475	480	5
Lauderbach	887	960	73
Loma Verde	591	740	149
Los Altos	395	960	145
Marshall	712	740	-132
McMillin	802	765	-37
Montgomery	428	510	82
Mueller	911	955	44
Olympic View	741	730	-11
Otay	667	670	3
Palomar	436	490	54
Parkview	486	655	169
Rice	713	780	61
Rogers	606	580	-26
Rohr	455	560	105
Rosebank	726	730	4
Silver Wing	553	630	77
Sunnyside	519	590	71
Tiffany	650	730	80
Valle Lindo	572	600	28
Valley Vista	622	680	58
Vista Square	751	730	60
Total	**25,534**	**27,380**	**1,846**

Source: CVESD.

Table F.2 Sweetwater Union High School District Enrollments vs. Capacity			
School Site	**Adjusted Total Capacity**	**Current Enrollment[1]**	**Capacity vs. Projected**
Middle Schools			
Bonita Vista	1,750	1,124	626
Castle Park	1,750	1,460	290
Chula Vista	1,650	1,340	310
EastLake	1,885	984	901
Granger	1,380	1,245	135
Hilltop	1,630	1,153	477
Mar Vista	1,581	1,332	249
Montgomery	1,641	1,160	481
National City	1,054	889	165
Rancho Del Rey	1,630	1,594	36
Southwest	1,350	895	455
Subtotal	17,301	13,176	4,125
High Schools			
Bonita Vista	2,770	2,492	278
Castle Park	2,140	2,248	-108
Chula Vista	2,500	2,421	79
EastLake	3,160	2,399	761
Hilltop	2,230	2,101	129
Mar Vista	1,879	1,948	-69
Montgomery	2,440	2,181	259
Otay Ranch	2,400	1,685	715
San Ysidro	2,400	2,546	-146
Southwest	2,408	2,252	156
Sweetwater	2,163	3,197	-1,034
Palomar	600	447	153
Subtotal	**27,090**	**25,917**	**1,173**
Total	**44,391**	**39,093**	**5,298**

Source: SUHSD

School Facilities Inventory, Sweetwater Union High School District

The SUHSD currently administers eleven (11) junior high/middle schools and twelve (12) senior high schools including one continuation high school within the District. Of the eleven junior highs, ten have been converted to middle schools serving grades seven and eight. Many of the older middle schools capacities have been adjusted to accommodate new growth, however, the older middle schools were not originally designed to accommodate their current student populations. As the population grows, the District is projecting a need for and must

secure funding for two possibly three new middle schools and three new high schools throughout the District's boundaries.

Within the district, the primary need over the next several years is at the high school level. In 2002, the district completed construction and opened San Ysidro High School in Otay Mesa. In 2003 the district opened the Otay Ranch High School in Village 2. Planned for the future are two middle schools, and two more high schools to be located in Otay Ranch.

Table F.3
Sweetwater Union High School District
2004-2008 Planned Schools

Future Schools	Capacity	Est. Opening Date
Junior/Middle School in EastLake Woods	1,500	2005
High School/Otay Ranch Village 7	2,650-2950	2006

II.5.4.4.5 School Sizing and Location

The Otay Ranch Village 7 is proposed to consist of 1,501 dwelling units at build-out. However, the proposed Village 7 SPA project consists of 1,204 dwelling units that will generate approximately 773 total students using the Student Generation Factors provided below.

		Single Family Detached	Multi-Family Attached[15]
Elementary (K-6)	=	.3851[16] students/dwelling unit	.2255 students/d.u.
Middle School (7-8)	=	.11 students/dwelling unit	.063 students/d.u.
High School (9-12)	=	.21 students/dwelling unit	.095 students/d.u.

By phase and school category, Otay Ranch Village 7 SPA project is expected to generate the following students:

Table F.4
Otay Ranch Village 7
Student Generation By Development Phase

Phase	Dwelling Units		Student Generation							
			Elementary (K-6)		Middle (7-8)		High School (9-12)		Total Students	
	SF	MF	SF	MF	SF	MF	SF	MF	SF	MF
White	0	0	0	0	0	0	0	0	0	0
Blue	346	448	133	101	38	44	76	88	247	233
Red	375	0	144	0	41	0	83	0	268	0
Green	35	0	13	0	4	0	8	0	25	0
Subtotal	756	448	291	101	83	44	166	88	541	233
Total	1204		392		127		254		773	

[15] Rates from SUHSD
[16] Rates from CVESD SFNA report, February 2003.

At full build-out, Village 7 is expected to generate additional students.

Chula Vista Elementary School District

The State Department of Education must approve the site prior to district acceptance of the proposed Village Due to the tremendous growth and enrollment in the CVESD, it is the district's intent to retain the 10-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.

The Village 7 Site Utilization Plan identifies a 10-acre elementary school site within the village core. As noted in Table F.4, the build-out of Village 7 would generate the need to house approximately 392 elementary school age students. Generally, CVESD prefers to construct elementary schools that serve approximately 750 students.

Sweetwater Union High School District

It is anticipated that the 126 middle school students generated by Village 7 will eventually be served at the future Village 7 Middle School. Students may attend the planned Village 11 Middle School or the Rancho del Rey Middle School until the Village 7 Middle School is constructed. The Village 11 Middle School site is approximately one mile east of Village 7. Rancho del Rey Middle School is located approximately three miles north of Village 7 along Paseo Ranchero. 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 there is abundant middle school capacity. Additional middle schools will be constructed when overall demand begins to approach existing capacity.

The maximum capacity of a high school is approximately 2,400 students. It is anticipated that the 381 students generated from Village 7 will be served at existing facilities until the Village 7 High School is completed.

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 or a site reserved pursuant to the Otay Ranch GDP.

II.5.4.4.6 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.

The current allowable rate for school fees has been limited by the passage of SB 50 (as Proposition IA on November 31, 1998). The current fee is $2.24 per square foot for residential construction and $.36 per square foot for nonresidential. These amounts are divided between the two districts as follows: For the Sweetwater District - $1.25 and $0.19 per square foot for residential and nonresidential, respectively; and for the Chula Vista District - $0.99 and $0.17 per square foot for residential and nonresidential, respectively.

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. The SUHSD is unable to meet the needs of this project with current school facilities and it is unable to construct new facilities to meet the impacts of this project through the provision of school fees.

In recognition of this funding deficiency, it is the policy 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 as a condition of approval of the SPA Plan (CVESD) or prior to recordation of a final map (SUHSD). The following Mello-Roos Districts have been created by each district:

SUHSD

CFD No.	1	EastLake
CFD No.	2	Bonita Long Canyon
CFD No.	3	Rancho del Rey
CFD No.	4	Sunbow
CFD No.	5	Annexable
CFD No.	6	Otay Ranch
CFD No.	7	Rolling Hills Estate
CFD No.	8	Coral Gate (Otay Mesa)
CFD No.	9	Ocean View Hills
CFD No.	10	Remington Hills (Annexable)
CFD No.	11	Otay Ranch (Lomas Verde)
CFD No.	12	Otay Ranch Village 1 West
CFD No.	13	San Miguel Ranch
CFD No.	14	Village 11 (Brookfield/Shea)
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	Remington Hills (Annexable)
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 $34,005 per student (2004 dollars). The cost for a middle school, including land acquisition, is approximately $33,637 per student (2004 dollars). The cost for an elementary school, including land acquisition, is approximately $24,000 per student (2004 dollars). Using the aforementioned costs per student together with the school size, the following costs per facility can be anticipated.

Elementary School Cost
(1000 students) ($24,000/student w/land cost) $24,000,000

Middle School Cost
(1,500 students) ($33,640/student w/ land cost) $50,460,000

High School Cost
(2,400 students) ($34,000/student w/ land cost) $81,600,000

The above costs are estimates only and are subject to change depending upon land and construction costs.

II.5.4.4.7 Threshold Compliance and Recommendations

1. As future development applications are processed in the Eastern Territories, the City shall coordinate with each school district to ensure that development does not occur until acceptable school site(s) are identified and a financing mechanism satisfactory to each district is in place.

2. Prior to Final Map approval, the project proponent(s) shall provide documentation to the City confirming satisfaction of SUHSD and CVESD facility funding requirements to offset student generation impacts. Funding shall be satisfied through the Mello-Roos Community Facilities District financing method or other means acceptable to each District. In addition, condition the first tentative map to require that no final map shall be approved unless and until a school facility financing mechanism is in place to the satisfaction of the Sweetwater Union High School District and the Chula Vista Elementary School District.

II.5.4.5 LIBRARIES

II.5.4.5.1 Threshold Standard

In the area east of I-805, the city shall construct, by buildout (approximately year 2030) 60,000 GSF of library space beyond the citywide June 30, 2000 GSF total. The construction of said facilities shall be phased such that the city will not fall below the citywide ratio 500 GSF per 1,000 population. Library facilities are to be adequately equipped and staffed.

II.5.4.5.2 Service Analysis

The City of Chula Vista Library Department provides library facilities.

II.5.4.5.3 Project Processing Requirements

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

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

II.5.4.5.4 Existing Conditions

The City provides library services through the Chula Vista Public Library at Fourth and "F" Street (Civic Center), the South Chula Vista Library in the Montgomery/Otay planning area, and the library at the EastLake High School. The Castle Park and Woodlawn Libraries have been closed. The existing and future libraries are listed on the Table G.1 and Table G.2, respectively.

Table G.1
Existing Library Facilities

Existing Libraries	Square Footage
Civic Center	55,000
South Chula Vista	37,000
EastLake	10,000
Total Existing Square Feet	**102,000**

II.5.4.5.5 Adequacy Analysis

Using the threshold standard of 500 square feet of library space per 1,000 population. The current demand for library space is approximately 103,944 square feet (based on a 12/03 estimated population of 207,999). Chula Vista currently provides 102,000 square feet of library space. This represents a current 1,944 square foot deficit. The demand generated by the 12,381 forecasted dwelling units (2004 through 2008) is 18,794 square feet (12,381 x 3.036[17]/1,000) x 500). By 2008 the demand for library space generated by the existing and forecasted dwelling units totals 122,739 (103,944 + 18,794) square feet. Comparing this

[17] Population coefficient of 3.036 persons per household.

demand to the existing library square footage of 102,000 square feet results in a deficit of 20,739 square feet after 2008. The SANDAG buildout population for Chula Vista is approximately 282,700. The City of Chula Vista is planning approximately 152,000 square feet of Library Facilities, which will meet build-out demand.

The Chula Vista Public Library Master Plan addresses such topics as library siting and phasing, the impacts of new technologies on library usage, and floor space needs. The plan calls for the construction of a full service regional library of approximately 30,000 square feet east of I-805 by the year 2005. The plan also recommends that this first branch be built in the Rancho del Rey at east H Street and Paseo Ranchero. During the past year the Library staff, in conjunction with the architectural firm of Carrier Johnson, has expended considerable time and effort in preparing conceptual plans for an approximate 36,400 square foot branch library to be constructed at the corner of East H Street and Paseo Ranchero. Further, the City Council approved an application for Library Bond Act grant funds to help construct the facility. Should the City be awarded a grant, the new branch should open by December 2005.

Even if the City does not receive grant funds, the Rancho del Rey Branch Library will be built. The Public Facilities Development Impact Fee for libraries was recently increased based upon the estimated $22 million cost of the Rancho del Rey Branch Library. This increase will ensure that enough funds are collected to construct and equip the project as planned. Under this scenario, the new branch is estimated to open in 2006.

However, with construction of the Rancho del Rey facility, the 10,000 square foot EastLake Library is recommended to be closed. With this closure, there is a projected net gain in library space of 5,481 square feet by the year 2007. Ultimately, with full buildout, the construction of a new regional library in Otay Ranch will keep pace with need.

Future library facilities are listed in the following table:

Table G.2
Future Library Facilities

Future Libraries	Square Footage	Estimated Cost
1st regional library (Rancho Del Rey) @ 30,000 sf	26,400*	$22,000,000
2nd regional library (Otay Ranch) @ 36,758 sf	23,600**	$15,000,000
Total Future Net Square Feet	**50,000**	
Total Master Plan Library Square Feet (existing and future)	**152,000**	

* Assumes construction of the first 36,400-square foot regional library by year 2006 and the closure of the 10,000-square foot EastLake library, per the Chula Vista Public Library Master Plan.

** Assumes construction of the second 23,600-square foot (minimum size) regional library.

Table G.3 highlights existing plus forecasted project demands for library space as compared to the existing and scheduled library space as well as the impact of the Otay Ranch Village 7 SPA on library facilities. The Otay Ranch Village 7 SPA will generate a total library demand of approximately 1,811 square feet, which can be accommodated in the projected total square feet of Library space.

Table G.3 Otay Ranch Village 7 SPA Library Space Demand vs. Supply				
	Population[18]	Demand Square Footage	Supply Square Footage	Above/(Below) Standard
Existing (Citywide)	207,999	103,944	102,000	(1,944)
Forecasted Projects to 2008[19]	37,589	18,975	0	(20,919)
1st regional library (Rancho del Rey)			26,400	5,481
Subtotal	**245,588**	**122,919**	**128,400**	**5,481**

11.5.4.5.6 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 2886 and 2887. The current fee for single family residential development is $5,048/unit, multi-family residential is $4,726/unit, commercial (including office) development is $20,764/acre and industrial development is $3,848/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA project.

The Otay Ranch Village 7 SPA is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Village 7 SPA Plan Libraries Fee obligation at buildout is $891,380.

Table G.4 Village 7 SPA Public Facilities Fees For Libraries							
Development Phase	Dwelling Units		Com'l Acres	Library Fee			
	SF	MF		Single Family $753/DU	Multi-Family $719/DU	Com'l $0/Ac.	Total Fee
White	0	0	0	$0	$0	$0	$0
Blue	346	448	0.0	$260,538	$322,112	$0	$582,650
Red	375	0	0.0	$282,375	$0	$0	$282,375
Green	35	0	0.0	$26,355	$0	$0	$26,355
Subtotal	756	448	0.0	$569,268	$322,112	$0	$891,380
Total	**1204**		**0.0**	**$569,268**	**$322,112**	**$0**	**$891,380**

11.5.4.5.7 Threshold Compliance and Recommendations

Based upon the analysis contained in this library section, the city's current library facilities (102,000 square feet) are 1,944 square feet below the threshold standard (see Table G.3). The existing plus proposed new library space totals 128,400 square feet. The total forecasted projects including the Otay Ranch Village 7 SPA project totals a demand 128,400 square feet by 2008. This results in an excess (above standard) supply of 5,481 square feet.

No mitigation is required other than the payment of the Public Facilities DIF for library facilities at the rate in effect at the time building permits are issued.

[18] Based on City of Chula Vista Estimates, 2003 GMOC Annual Report.

[19] 12,381 dwelling units x 3.036 persons per dwelling

II.5.4.6 PARKS, TRAILS AND OPEN SPACE

II.5.4.6.1 Park Threshold Standard

Three (3) acres of neighborhood and community parkland with appropriate facilities shall be provided per 1,000 residents. This standard is specified in Section 17.10.040 of the Chula Vista Municipal Code.

II.5.4.6.2 Service Analysis

The City of Chula Vista provides public park and recreational opportunities through the General Services, 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 deciding body, 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 Otay Ranch.

The City Council approved the Chula Vista Parks and Recreation Master Plan in November 2002. The Plan provides guidance for planning, siting and implementation of neighborhood and community parks.

II.5.4.6.3 Project Processing Requirements

SPA Plan/Public Facilities Finance Plans

1. Identify phased demands in conformance with the number of dwelling units constructed, street improvements and in coordination with the construction of water and sewer facilities.
2. Specific siting of the facility will take place in conformance with the *Chula Vista General Plan Park and Recreation Element.*
3. Site reserved at the SPA level of planning.

II.5.4.6.4 Existing Conditions

The existing and future parks as depicted in the Park and Recreation Element of the General Plan and as updated by the inclusion of more recent information are contained in the city's Park Master Plan.

11.5.4.6.3 Project Park Requirements

Compliance with Public Park Standards

The Village 7 SPA generates an estimated population of 3,655 (1,204 dwelling units x 3.036 population factor). To meet the city threshold requirements the amount of parkland dedicated is based on a standard of 3 acres per 1,000 populations (see Table H). The standard is based on State of California Government Code 66477, also known as the Quimby Act, that allows a city to require by ordinance, the dedication of land or payment of fees for park or recreational purposes.

Table H.1 Quimby Act Parkland Requirements		
Village 7 SPA Population	**Standard**	**Parkland Acres Required**
3,655	3 acres per 1,000 population	10.97

The City of Chula Vista Municipal Code (CVMC) Chapter 17.10, Parklands and Public Facilities, is based on the Quimby Act. However, the city's standard is slightly higher and is based on dedication of land on a per unit basis. Land is offered for dedication at the time of filing of a final map, or in the case of a residential development that is not required to submit a final map, at the time of the first building permit. Based on the City's Parklands and Public Facilities Ordinance, the parkland requirement is 11.48 acres (see Table H.3).

All new development in the City of Chula Vista is subject to the requirements contained in the CVMC Chapter 17.10, Parklands and Public Facilities. The ordinance establishes land development fees for park 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. Single Family dwelling units are defined as single-family detached homes and detached condominiums. Multi-Family dwelling units include attached condominiums, townhouses, duplexes, triplexes and apartments. Parkland dedication requirements are shown on Table H.2.

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

City of Chula Vista Municipal Code Chapter 17.10, Parklands and Public Facilities requirements for the Otay Ranch Village 7 SPA project are outlined in Table H.3.

Table H.3 Otay Ranch Village 7 Parkland Dedication Requirements per City Ordinance			
Dwelling Unit Type	**Number of D.U.**	**Parkland Required/DU**	**Required Acres**
Single Family Detached	746	460 sf/du	7.98
Multiple Family	448	341 sf/du	3.50
TOTAL	**1,204**		**11.48**

The Otay Ranch Village 7 SPA Phasing (Table B.4) 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 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 CVMC Chapter 17.10, Parklands and Public Facilities. The Neighborhood Park will be graded and offered for dedication in the context of the development of whatever phase is initiated by the Otay Ranch Village 7 Developers.

Table H.4 Otay Ranch Village 7 SPA Plan Park Acres And Eligible Credits[20]				
Park Identification	**Net Acreage**	**Phase**	**Proposed Credit %**	**Eligible Credit Acres**
NP - NEIGHBORHOOD PARK	7.0	Blue	100%	7.00
CP - COMMUNITY PARK	0.0	N/A	0	0.00
Total acres eligible for credit against PAD				7.00
Village 7 SPA PAD Requirements				11.48
Total Village 7 SPA CP Obligation				**4.48**

II.5.4.6.6 Park Adequacy Analysis

The table below, 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 Village 7 SPA project.

Table H.5 Park Acreage Demand Compared to Supply East of Interstate 805 As of January, 2004					
	Population East of I-805[21]	**Demand Park Acres[22]**	**Existing Park Acres**	**Eligible Credit Acres**	**Net Acres +/-Standard**
Existing	88,774	266.3	277.6[23]	277.6	+11.3
Forecasted Projects 2004 to 2008	34,553[24]	103.7	116.2[25]	116.2	+12.5
Total	**123,327**	**370.0**	**393.8**	**393.8**	**+23.8**

A review of the existing and approved park demands for Chula Vista east of I-805 including Otay Ranch Village 7 indicates a total demand of approximately 370.0 acres of Neighborhood and Community Park. The total supply of existing park acreage east of I-805 is approximately 393.8, which is 23.8 acres more than the demand by the end of 2008.

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20 Parkland fee and acreage obligations are subject to change pending changes in the dwelling unit types and numbers.

21 Population figures are from the GMOC 2003 Questionnaire, 6/30/03.

22 Based on City Threshold requirement of 3 acres of neighborhood and community parkland per 1,000 residents east of I-805.

23 Includes Harvest Park (Village 1) and Santa Cora Park (Village 5).

24 Population figure derived from the 2003 Annual Growth Forecast, January 2004.

25 Park acreage from Park Phasing Eastern Chula Vista (2004-2007) table from the GMOC 2003 Questionnaire.

Table H.6 Otay Ranch Village 7 SPA by Phase							
Phase	Dwelling Units		Demand Park Acres	Supply Park Acres	Eligible Credit Acres	Net Acres +/- Standard	Project Cumulative +/- Standard
	SFD	MF					
White	0	0	0	0.00	0.00	0.00	0.00
Blue	346	448	7.16	7.00	7.00	-0.16	-0.16
Red	375	0	3.96	0.00	0.00	-3.96	-4.12
Green	35	0	0.36	0.00	0.00	-0.36	-4.48
Total	**756**	**448**	**11.48**	**7.00**	**7.00**	**-4.48**	**-4.48**

The proposed development of the Otay Ranch Village 7 SPA project requires a total of 11.4 acres for public parkland. The Otay Ranch Village 7 SPA plan identifies one 7.0-acre net public Neighborhood Park. It will be located within the village core of the project and will be phased in as determined by the Director of Planning and Building Department. The difference in the proposed Neighborhood Park requirements and the total parkland obligation will be accommodated through the payment of parkland development fees and dedication of land for Community Park elsewhere in Otay Ranch. Community Park acreage requirements will be accommodated through the dedication of land and the payment of fees.

II.5.4.6.7 Open Space and Trails

Open Space

The Otay Ranch GDP established a 12-acre per 1000 person open space standard, which is being met primarily by the offsite dedication of open space acreage within the Management Preserve pursuant to the RMP. On-site the location and general extent of open space is determined at the GDP level of planning. The Village 7 SPA provides 47.8 acres of on-site open space that includes the use of buffer areas, slopes and scenic corridors as required by the Otay Ranch GDP. The 47.8 acres exceeds the 43.86 acre (12-acre per 1000 person open space) standard.

Natural open space can be classified as land that has not been disturbed by development. The bulk of the natural open space within Otay Ranch is included within the RMP. The RMP establishes a Resource Preserve, which does not include any of the Village 7 planning area. The GDP categorizes "other open space" as a mixture of neighborhood and community parks, bike trails, hiking trails, school playgrounds, utility easements, scenic corridors, pedestrian walkways, landscape buffers, and other public recreation areas. The other open space areas identified for Village 7 are the arterial highway corridors, development perimeter slopes, neighborhood park, elementary school, middle school and high school playgrounds.

The 47.8 acres of Open Space lands as indicated on the Village 7 Site Utilization Plan shall be preserved through the dedication of open space easements and/or lots to the City, CFD or other appropriate agency, or to a Master Homeowners Association, which will be determined at the tentative tract map level of approval. Uses will be strictly controlled through zoning regulations (see Section II.3 PC District Regulations within this SPA Plan). Landscaping within open space areas shall comply with all requirements of the Chula Vista Landscape Manual.

Trails

Off-street trails that connect to the community-wide trail system of Otay Ranch as well as the regional system described in the Circulation Element of the Chula Vista General Plan are included as components of the perimeter arterials of Village 7. La Media Road includes a 10-foot off-street (Class I) trail for pedestrian and bicycle use within the ROW on the Village 7 side. The south side of Birch Road between Magdalena and SR-125 will be constructed with a 10-foot Village Pathway and 5-foot sidewalk. Both Birch and Rock Mountain Road include bike lanes (Class II) adjacent to the curb. Rock Mountain will be constructed with a five-foot wide pedestrian path behind the curb on both sides of the street. Within the village, the 10-foot Village Pathway extends along the Primary Entry Streets and the Village Promenade, connecting to the internal neighborhoods as well as the adjacent villages to the north and south. A similar, 10-foot wide regional trail extends along the Secondary Village Promenade from the SR-125 underpass to the Wolf Canyon Open Space Greenbelt. Pedestrian trails that vary in width from 5 to 6-feet are shown on the opposite side of the street from the Village Pathways and on both sides of the Residential Promenade.

Bicyclists will share the internal streets with motor vehicles due to the low traffic volume and limited speeds allowed on residential streets. The trails and bike lanes provided are indicated on the Trails Plan, Exhibit 10. Generally, the pedestrian trails follow the bicycle routes. Where the trails are off-street, the pedestrian and bicycle facilities are shared. Where bicyclists share the roadway with other vehicles, sidewalks are provided exclusively for pedestrians.

II.5.4.6.8 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. PAD Fees are subject to periodic annual increases. The Otay Ranch Village 7 SPA project is responsible for the park development component of the PAD Fees as estimated in Table H.7.

TABLE H.7
Village 7 Park Acquisition and Development (PAD) Fees[26]
Development Component Only

Development Phase	Dwelling Units		Development Component Of PAD Fee's/DU Total		Total Fees Due
	SFD	MFD	SFD@$3,777	MFD@$2,803	
White	0	0	$0	$0	$0
Blue	346	448	$1,306,842	$1,255,744	$2,562,586
Red	375	0	$1,416,375	$0	$1,416,375
Green	35	0	$132,195	$0	$132,195
TOTAL	**756**	**448**	**$2,855,412**	**$1,255,744**	**$4,111,156**

[26] The Park Acquisition and Development Fee is subject to change as it is amended from time to time. Changes in the number of dwelling units can change the estimated fee.

TABLE H.8 Village 7 Park Acquisition and Development (PAD) Fees[27] Acquisition Component Only					
Development Phase	Dwelling Units		Acquisition Component Of PAD Fees/DU Total		Total Fees Due
	SFD	MFD	SFD@$4,994	MFD@$3,707	
White	0	0	$0	$0	$0
Blue	346	448	$1,503,716	$1,660,736	$3,164,452
Red	375	0	$1,629,750	$0	$1,629,750
Green	35	0	$152,110	$0	$152,110
TOTAL	**756**	**448**	**$3,285,576**	**$1,660,736**	**$4,946,312**

The Otay Ranch Village 7 SPA parkland demand is 11.4 acres based on the city's Park Land Dedication Ordinance. The Village 7 project will provide 7.0 net acres of parkland. The 4.4 acre balance will be provided through the payment of PAD fees and/or dedication of land elsewhere in Otay Ranch. 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. The applicant has the opportunity to dedicate the 11.4 acres in lieu of paying the acquisition component of the PAD fees, which has been calculated in Table H.8 is estimated $4,946,312.

II.5.4.6.9 Financing Recreation Facilities

On November 19, 2002, the City Council approved Ordinances No. 2886 and 2887, which amended Chapter 17.10 of the Chula Vista Municipal Code, as detailed in the *"Park Acquisition and Development Fee, 2002 Update"* report, contributing to an increase in the in-lieu fees for park development and land acquisition. 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 Interstate 805. PAD fees cover parkland acquisition and the cost of related capital items associated with parkland development, including:

[27] The Park Acquisition and Development Fee is subject to change as it is amended from time to time. Changes in the number of dwelling units can change the estimated fee.

- 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
- Fine Grading
- Outdoor Sports Venues *(tennis courts, baseball/softball fields. basketball courts, soccer 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
- Senior/teen centers

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 $31.8 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.

TABLE H.9
Village 7 Public Facilities Fees for Recreation[28]

Development Phase	Dwelling Units		Recreation Fee		Total
	SF	MF	$1,079/SF Unit	$771/MF Unit	
White	0	0	$0	$0	$0
Blue	346	448	$373,334	$345,408	$718,742
Red	375	0	$404,625	$0	$404,625
Green	35		$37,765	$0	$37,765
Total	756	448	$815,724	$345,408	$1,161,132

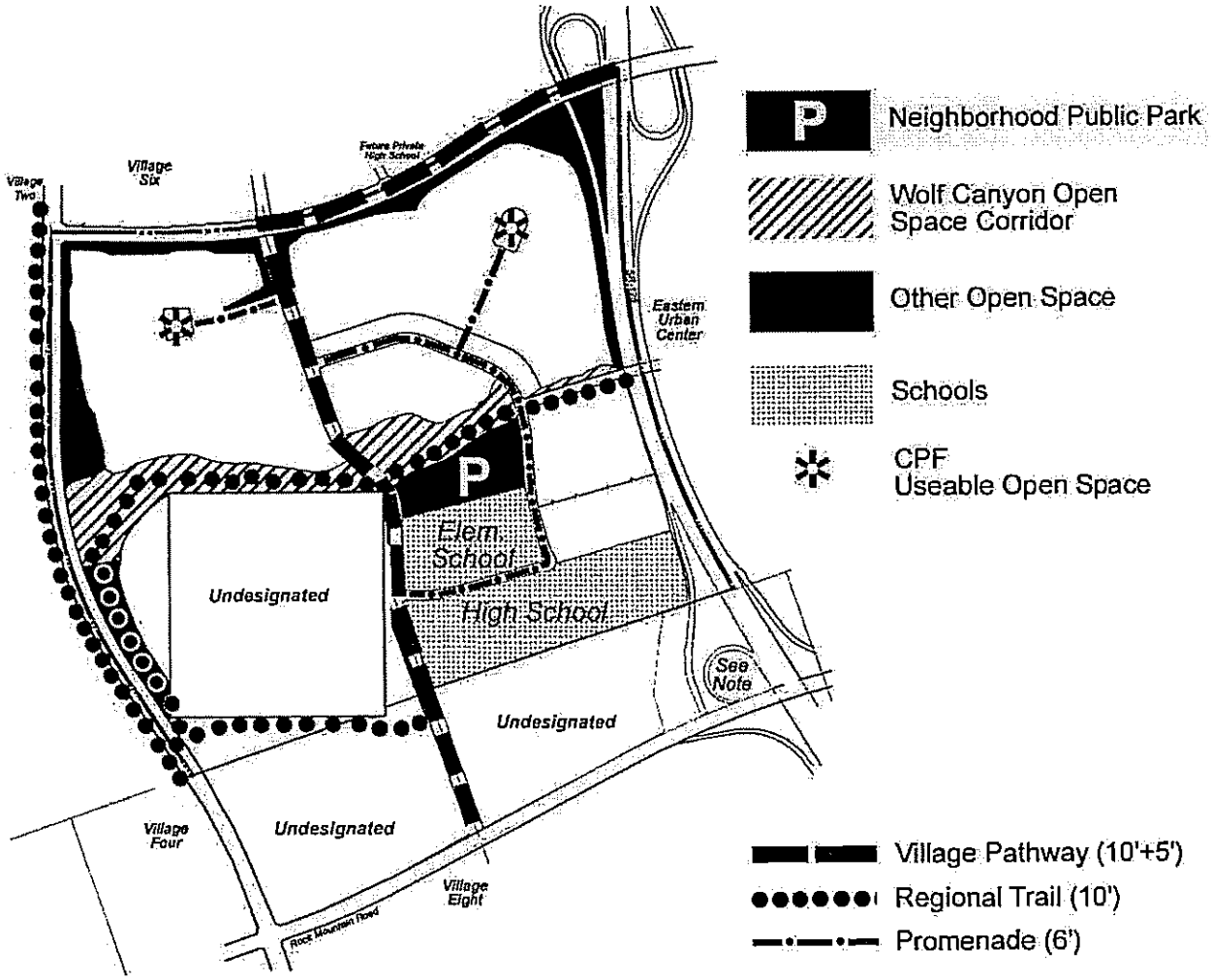
II.5.4.6.10 Threshold Compliance and Recommendations

Based upon the analysis contained in this section of the PFFP, the parks standard for both neighborhood and community parks measured on an area-wide basis east of Interstate 805 is projected to be met at the completion of the Otay Ranch Village 7 SPA project.

[28] Public Facility Fees for Recreation is subject to change as it is amended from time to time. Changes in the number of dwelling units can change estimated fee.

On a project-level, the Neighborhood Park provided within Otay Ranch Village 7 SPA does not meet 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 CVMC Chapter 17.10, Parklands and Public Facilities unless otherwise approved by the Director of General Services.

Parks & Open Space



Note:
The configuration of the interchange ramps shown on this exhibit is illustrative only and does not preclude alternative configurations.

CITY OF CHULA VISTA

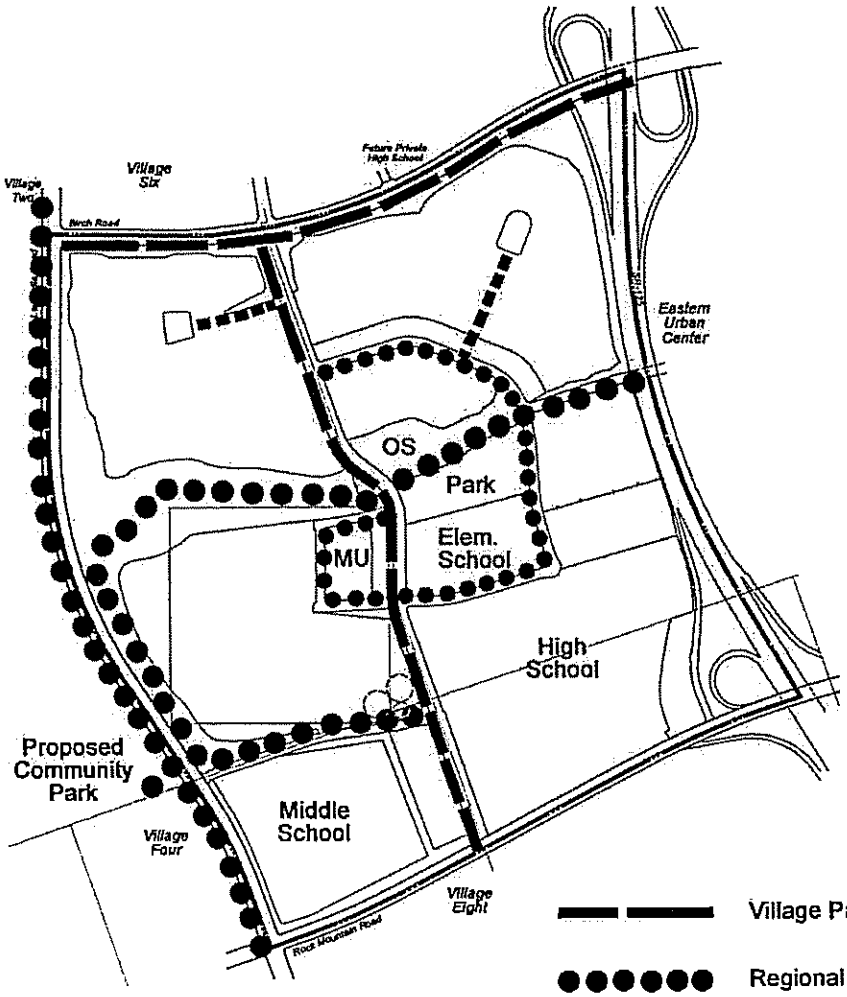
Vista Verde

Village Seven - Otay Ranch

City Land Planning
8/24/04

Exhibit 9

Trails



Village Pathway *(10' + 5')*

Regional Trail *(10' - D.G. in Wolf Canyon)*

Village Core Promenade *(6')*

Residential Promenade *(6')*

CITY OF CHULA VISTA

Vista Verde

Village Seven - Otay Ranch

Civil Land Planning

3/25/04

Exhibit 10

II.5.4.7 WATER

II.5.4.7.1 Threshold Standard

1. Developer will request and deliver to the City a service availability letter from the Water District for each project, as defined by the City.

2. The City annually provides the San Diego County Water Authority, the Sweetwater Authority, and the Otay Water District with a 12 to 18 month development forecast and requests an evaluation of their ability to accommodate the forecast and continuing growth. The Districts' replies should address the following:

   a. Water availability to the City and Planning Area, considering both short and long term perspectives.

   b. Amount of current capacity, including storage capacity, now used or committed.

   c. Ability of affected facilities to absorb forecasted growth.

   d. Evaluation of funding and site availability for projected new facilities.

   e. Other relevant information the District(s) desire(s) to communicate to the City and GMOC.

The growth forecast and water district response letters shall be provided to the GMOC for inclusion in its review.

II.5.4.7.2 Service Analysis:

The Otay Water District (OWD) will provide water service for Otay Ranch Village 7. 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.

The *Village 7 Conceptual Water and Recycled Water Study, March 10, 2004 PBS&J,* is the basis for this section of the PFFP. The PBS&J report provides recommendations for improvements in zones 711 and 980 that are needed to provide water service to the proposed development. In addition to potable water, the PBS&J report provides recommendations for improvements in the recycled water zones 680 and 944 for the project.

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) concurrent with the processing of the tentative map and prior to approval of the 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 Otay Water District 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 Otay Ranch Village 7 project are established in accordance with the *Otay Water District Water Resources Master Plan, July 2002.* 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.

The Village 7 project is consistent with land use and water demand assumptions in the District's Water Resource Master Plan (July 2002). Pursuant to city requirements, the OWD will conduct a water audit to verify that the District has planned and sized water supply facilities to meet Village 7 needs. Furthermore, the District receives its treated water from the San Diego County Water Authority (SDCWA), which has developed water supply plans based on the District's future needs. The SDCWA has prepared a Water Facilities Master Plan (2003), which recommends projects to meet long term water supply needs. These projects include securing water supply from Colorado River and local water supply development, including seawater desalination and water reclamation. Accordingly these planned water supply projects will secure a long-term water supply and satisfy Senate Bill (SB) 610.

II.5.4.7.3 Project Processing Requirements

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

1. Identify phased demands in conformance with street improvements and in coordination with the construction of sewer facilities.
2. Identify location of facilities for onsite and offsite improvements in conformance with the master plan of the water district serving the proposed project.
3. Provide cost estimates and proposed financing responsibilities.
4. Identify financing methods.
5. 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.

11.5.4.7.4 Existing Conditions

Most of the water used in the San Diego County Water Authority (SDCWA) area is imported from the Metropolitan Water District (MWD). MWD receives its water supply through the State Water Project and the Colorado River Aqueduct. The SDCWA conveys water from the MWD to local purveyors within San Diego County. The project area is located within the Central Service Area of the Otay Water District. Potable water for the development will be supplied from the 711 and 980 pressure zones.

Domestic water demand for the SPA Plan area will be estimated as a part of the SAMP to be approved by the OWD. An analysis of available water supply will also be completed to assure that sufficient supplies are planned to be available as demand is generated by the project.

Current OWD policies regarding new subdivision development require the use of recycled water where available. Consistent with the Otay Ranch GDP, it is anticipated that recycled water will be used to irrigate street parkway landscaping, parks and manufactured slopes along open space areas and landscaped areas of commercial, industrial and multi-family sites.

Recycled water supply is currently available from the Ralph W. Chapman Water Recycling Facility located near the intersection of Singer Lane and Highway 94. The plant has a practical capacity of 1.0 million gallons per day (MGD). The recycled water is delivered from the plant to storage ponds with a high water level of 944 feet situated within the District Use

Area located north of Proctor Valley Road. Potable water is currently used to supplement the recycled water supply during summer and dry weather month conditions.

Recycled water supply is also anticipated to be available from the City of San Diego's 15.0 MGD South Bay Water Reclamation Plant. This supply will be delivered to the District at a grade of 450 feet and then pumped to the 680 and 944 Zones via the planned 450-1 and 680-1 pump stations.

II.5.4.7.5 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.

This SPA Plan includes a Water Conservation Plan. The Water Conservation Plan 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. This document is presented as chapter 9 of the SPA Plan document and therefore is not included in the PFFP.

B. Otay Ranch Village 7 SPA Water Demand

Table I.1 presents the duty factors used in projecting the total average day potable and recycled water demands for Village 7. 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.

Table I.1
Water Duty Factors

Land Use Designation	Unit Domestic Demand	Required Fire Flow	Required Fire Flow Duration Hours
Single Family-(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	893 gpd/ac	3,000	3
Irrigation (Recycled Water)	2,155 gpd/ac	--	--

According to the PBS&J report the projected potable water demand for Village 7 area is approximately .59 million gallons per day (mgd) (see Table I.2).

Table I.2
Potable Water Demands

Land Use	Net Area	Dwelling Units	Unit Demand[1]	Average Daily Demand (gpd)
SF Residential	109.6	756	500 gpd/du	378,000
MF Residential	37.9	448	300 gpd/du	134,400
Elementary School	11.1		1,785 gpd/ac	19,814
High School	23.4		1,785 gpd/ac	41,769
Park	7.6		2,155 gpd/ac	16,378
CPF	2.8		893 gpd/ac	2,500
TOTAL		**1,204**		**592,861**

Source: PBS&J

1 Unit demand factors from draft Otay Water District Water Resources Master Plan (July 2002)

Generally, the potable water distribution system is designed to maintain static pressures between 65 pounds per square inch (psi) and 200 psi. This criterion 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 (fps) under a maximum day plus fire flow scenario and a maximum velocity of 6 fps under peak hour flow conditions.

Landscape systems generally require a minimum of 65 psi at the meter to obtain adequate coverage of the irrigated area. It is expected 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 the maximum pipeline velocity between 5 to 8 fps. Table I.3 provides the projected recycled water demand for the project. The estimated recycled water demand is approximately 0.110 mgd.

Table I.3
Recycled Water Demands

Land Use	Net Area	Percent Irrigate	Irrigated Area (Ac)	Irrigation Rate[1]	Average Daily Demand (gpd)
MF Residential	37.9	15%	5.7	2.152 gpd/du	12,234
Park	7.6	100%	7.6	2,152 gpd/ac	16,355
Elementary School	11.1	20%	2.2	2.152 gpd/ac	4,777
High School	23.4	20%	4.7	2,152 gpd/ac	10,114
CPF	2.8	20%	0.6	2,152 gpd/ac	1,291
Open Space	47.8	50%	23.9	2,152 gpd/ac	51,433
Streets	62.9	10%	6.29	2,152 gpd/ac	13,536
TOTAL					**109,740**

Source: PBS&J

1 Unit demand factors from draft Otay Water District Water Resources Master Plan (July 2002)

II.5.4.7.6 Existing Water Facilities

The Project will receive supply from the District's Central Service Area. The San Diego County Water Authority via the Second San Diego Aqueduct supplies potable water to the Central Service Area. Water is delivered at Aqueduct connections No. 10 and No. 12 and is conveyed by gravity to District reservoirs with a high water level of 624 feet. Water is then pumped from the 624 Zone to the 711 and 980 Zones via the Central Area Pump Station (711-1 Pump station) and the EastLake Pump Station (980-1 Pump Station), respectively.

Recycled water supply is currently available from the Ralph W. Chapman Water Recycling Facility located near the intersection of Singer Lane and Highway 94. The plant has a practical capacity of 1.0 million gallons per day (MGD). The recycled water is delivered from the plant to storage ponds with a high water level of 944 feet situated within the District Use Area located north of Proctor Valley Road. Potable water is currently used to supplement the recycled water supply during summer and dry weather month conditions.

Recycled water supply is also anticipated to be available from the City of San Diego's 15.0 MGD South Bay Water Reclamation Plant. This supply will be delivered to the District at a grade of 450 feet and then pumped to the 680 and 944 Zones via the planned 450-1 and 680-1 pump stations.

Potable and recycled water service to the Project will be provided through extension of existing transmission mains in La Media and Birch Roads. Existing potable water mains include a 16-inch 711 Zone main in Olympic Parkway that will be extended in La Media Road and Hunte Parkway/Birch Road to the Project boundary, and a 16-inch 980 Zone main in Olympic Parkway that will be extended through Village 6 and Hunte Parkway/Birch Road toward SR125.

Existing recycled mains that will be extended to the project include a 20-inch 680 Zone main and 12-inch 944 Zone main in Olympic Parkway will be extended in La Media and Hunte Parkway/Birch Road.

Operational and emergency potable water storage for the Project will be provided in the existing 711 reservoirs located in the EastLake Greens subdivision (711-1 and 711-2 Reservoirs) and the District Use Area (711-3 Reservoir) and 980 Zone Reservoirs located in the District Use Area (980-1 and 980-2 Reservoirs).

II.5.4.7.7 Proposed Facilities:

The Project can receive water service by expanding the existing potable and recycled water systems. These extensions will be constructed either as part of adjacent subdivision development or concurrent with development of the project. Per District policy, the District will fund construction of regional water mains in La Media Road, Hunte Parkway, and Birch Road as Capital Improvement Program projects. Based on District planning criteria, redundant sources of potable water supply to the Project will be required prior to occupancy of the development.

Exhibit 11 illustrates the conceptual on-site potable water distribution systems for the project. While Exhibit 12 illustrates the conceptual on-site recycled water distribution systems for the project. Sizes of the on-site facilities will be determined based on final site layout and design criteria specified in the District Master Plan. As previously mentioned, a Sub-Area Master

Plan will be prepared concurrent with development of the Project tentative map that will address the sizing and phasing of onsite and off-site water facilities for the project based on hydraulic analysis of the proposed water system.

II.5.4.7.8 Financing Water Facilities:

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

Capacity Fees:
Otay Water District'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 Otay Water District 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.

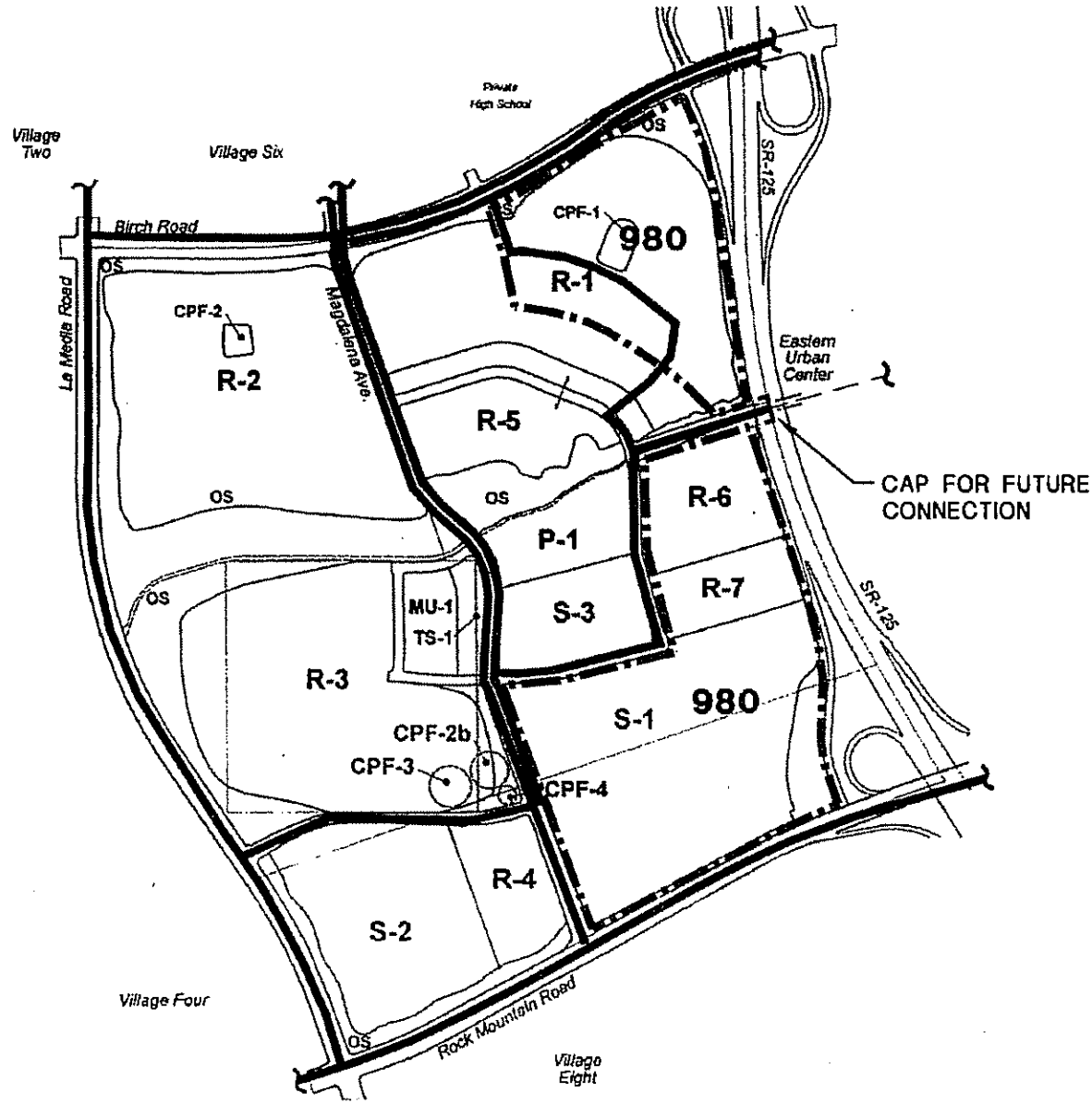
Exaction:
The developer is required to finance, construct, dedicate water and recycled water facilities that serve only his/her development to the Otay Water District.

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.

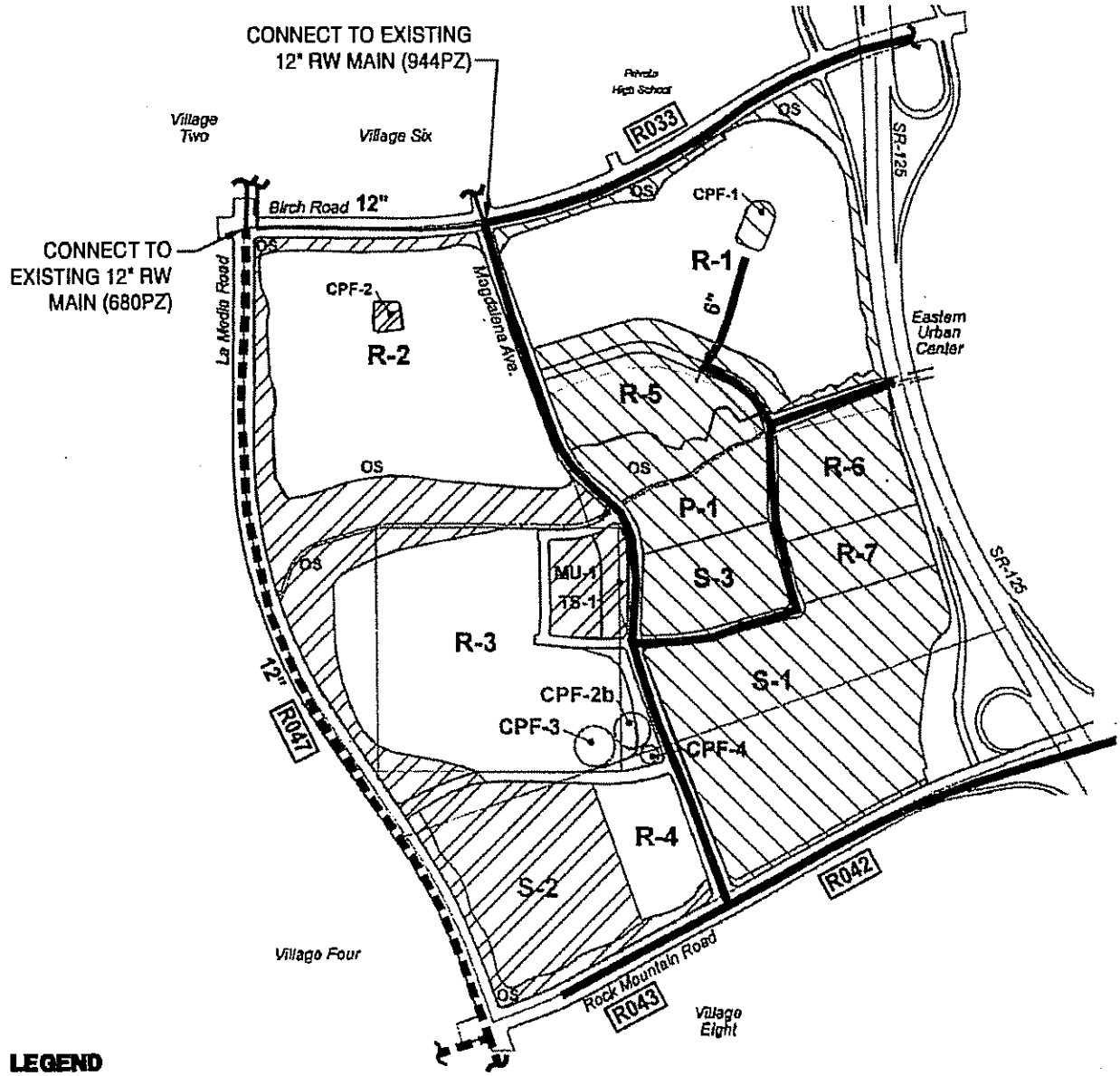
II.5.4.7.9 Threshold Compliance and Recommendations

1. The Otay Ranch Village 7 SPA project shall have a district approved SAMP, prior to approval of a Final Map.
2. The potable and recycled water systems will be designed and the costs identified by phase of development. The applicant shall be responsible for funding the required system improvements. The developer shall request and deliver to the City a service availability letter from the OWD prior to the first final map being approved for Otay Ranch Village 7 SPA Project.



Note: Refer to the Site Utilization Plan on page 15 of this PFFP for approved SPA land uses.

Exhibit 11
Proposed Water Facilities



RECYCLED WATER SYSTEM

Note: Refer to the Site Utilization Plan on page 15 of this PFFP for approved SPA land uses.

Exhibit 12
Proposed Recycled Water Facilities

II.5.4.8 SEWER

II.5.4.8.1 Threshold Standard

1. Sewage flows and volumes shall not exceed City Engineering Standards.

2. 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. As an alternative, the City of Chula Vista Public Works Department will gather the necessary data. The information provided to the GMOC shall include the following:

   a. Amount of current capacity now used or committed.

   b. Ability of affected facilities to absorb forecast growth.

   c. Evaluation of funding and site availability for projected new facilities.

   d. Other relevant information.

II.5.4.8.2 Service Analysis

The City of Chula Vista currently purchases capacity for wastewater treatment through the City of San Diego. Chula Vista oversees the construction, maintenance and the operation of the sewer trunk line system. The City Engineer is responsible for reviewing proposed developments and ensuring that the necessary sewer facilities are provided with each development project.

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 July 1989 and shall comply with all city engineering standards.

The source of information regarding the existing and recommended sewer facilities is from the *Otay Ranch Village 7 Conceptual Sewer Study, April 14, 2004, by PBS&J.* This study is referred to as the PBS&J Sewer Study throughout this PFFP. In addition, this study analyzed the entire Village 7 Planning Area of which the proposed SPA Plan includes approximately 76%.

II.5.4.8.3 Project Processing Requirements

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

1. Identify phased demands for all sewer trunk lines in conformance with the street improvements and in coordination with the construction of water facilities.

2. Identify location of facilities for onsite and offsite improvements, including reclaimed water facilities, in conformance with the PBS&J Sewer Study.

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

4. Identify financing methods.

II.5.4.8.4 Existing Conditions

Sewer service for Village 7 will be provided by the City of Chula Vista. The city operates and maintains its own sanitary sewer collection system that connects to the City of San Diego's Metropolitan Sewerage System. The *Otay Ranch Master Plan of Sewerage dated 1993, by Wilson Engineering*, documented the feasibility of providing sewer service to the project area.

The Village 7 project will drain into two sewer basins. The northern portion of the Project will drain to the Poggi Canyon Sewer Basin. This includes Neighborhoods R-l, R-2, R-5, P-l, P2/CPF-1, and P3/CPF-2. Wastewater collected within this basin will be conveyed to existing and planned sewer mains in Birch Road and La Media Roads that discharge to the existing Poggi Canyon Interceptor in Olympic Parkway. The southern portion of the Project is located in the Wolf Canyon Basin and includes Neighborhoods R-3, R-4, S-2, MU-1, TS-1, CPF-2b, CPF-3, and CPF-4. Wastewater flows will be conveyed by gravity to the future Wolf Canyon Trunk Sewer in Rock Mountain Road. The City anticipates completion of this sewer by the end of 2008.

The current regional phasing plans for the Wolf Canyon Trunk Sewer indicate that the sewer may not be completed until after the commencement of development within portions of Village 7 situated in the Wolf Canyon Basin. To serve these parcels, wastewater flows will be temporarily diverted to the Poggi Canyon Basin via on-site gravity mains. These parcels include Neighborhoods R-6, R-7, S-3, and S-1. All wastewater generated within the Project will eventually be conveyed to the Salt Creek Interceptor west of I-805 that discharges to the City of San Diego's South Metro Interceptor. The wastewater is ultimately treated by the City of San Diego at the existing Point Loma Wastewater Treatment Facility.

Proposed graded elevations will range from a low of approximately 410 feet in Wolf Canyon along the western boundary of the site to a high of approximately 570 to 580 feet in the northeast and southeast corners of the site. Natural drainage on the property is generally from east to west. The northernmost portion of the site drains in a northwesterly direction to the Poggi Canyon Drainage Basin and the southern portion of the Project drains in a westerly direction to the roadways, Magdalena Avenue and La Media Road, and then south to the Wolf Canyon Drainage Basin (see Drainage section exhibits).

II.5.4.8.5 Adequacy Analysis

Sewer flows generated by Village 7 were estimated by PBS&J. 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 Generation & Treatment:**

In accordance with the City of Chula Vista Subdivision Manual, the PBS&J sewer study used city criteria to estimate sewer flows from different land uses. Single-family homes are estimated to produce an average of 265 gallons per day (gpd). Multi-family homes are assumed to produce 75 percent of the single-family generation, or 199 gpd. Elementary schools are assumed to produce 15 gallons per capita per day (gpcd). Middle and High Schools are estimated to produce 20 gpcd. For this study, it is assumed that the planned elementary school will house approximately 800 students, the middle school will

accommodate approximately 1,400 students, and the High School will have approximately 2,400 students. Commercial and community purpose development are assumed to generate 2,500 gpd per acre.

The Development Phasing Forecast Summary (2004 to 2008), as shown on Table J.1 lists 12,381 residential dwelling units (includes Otay Ranch Village 7) to be finaled by 2008. According to the Planning Department, approximately 20 acres of industrial, and 150 acres of commercial, in various categories of entitlement, are expected to be constructed through the year 2008. The City Engineering department estimates the current sewer capacity is approximately 4.151 mgd. Applying the per day wastewater factors for each land use generates approximately 4,083,465 gallons per day of wastewater associated with the forecasted development category. The forecasted development reduces the existing city sewer capacity surplus from 4.151 mgd to approximately .446 mgd (4,151,000 –3,705,065). The city will acquire additional capacity from the City of San Diego' Metropolitan System. In addition, capacity is available from the City of San Diego's Southbay Reclamation Facility.

Table J.1
Sewer capacity used by forecasted development

Land Use Type	2008 Forecast	Generation Factor	Gallons per Day
Residential	12,381 DU	265 gpd/unit	3,280,065
Commercial	150 Acres	2,500 gpd/acre	375,000
Industrial	20 Acres	2,500 gpd/acre	50,000
Total used by Forecasted Development			**3,705,065**
Total remaining sewer capacity			**445,935**

According to the PBS&J sewer study the projected flows from the Otay Ranch Village 7 planning area are 480,647 gpd as shown in Table J.2. The Village 7 SPA does not include the entire Village 7 area.

Table J.2
Village 7
Projected Wastewater Generation by Land Use

Land Use	Number	Units	Generation Rate[1] (gpd/Unit)	Average Daily Flow (gpd)
SF Residential	1053	DU	265	279,045
MF Residential	448	DU	199	89,152
High School	2400	Students	20	48,000
Middle School	1400	Students	20	28,000
Elementary School	800	Students	15	12,000
Commercial	5.6	AC	2500	14,000
CPF	2.3	AC	2500	5,750
Park	9.4	AC	500	4,700
Total				**480,647**

[1] Unit demand factors from Chula Vista Subdivision Manual (July 2001) Source: PBS&J

The average wastewater generation rates were projected by the PBS&J Sewer Study for permanent and interim on-site sewer system conditions and then by respective basins. The permanent condition reflects the sewer system after Village 7 is fully developed and the Wolf Canyon Trunk Sewer is operational. The interim condition represents the temporary diversion of the southeastern portion of the Project to the Poggi Canyon Basin until the Wolf Canyon Trunk Sewer is constructed. This includes the high school, elementary school, and two multi-family neighborhoods (R-6 and R-7).

Tables J.3 and J.4 present estimated average Project wastewater flow generation and equivalent dwelling units for the permanent sewer system by sewer basin. The average projected flow rates for the Poggi Canyon and Wolf Canyon Basins are approximately 225,348 gpd (850 EDUs) and 255,299 gpd (963 EDUs), respectively.

Table J.3
Village 7 - Permanent Condition
Poggi Canyon Sewer Basin Sewage Flows and EDUs by Unit ID

Neighborhood ID	Land Use	Number	Units	Generation Rate[1] (gpd/Unit)	Average Daily Flow (gpd)	EDU
R-1	SF Residential	351	DU	265	93,015	351
R-2	SF Residential	375	DU	265	99,375	375
R-5	MF Residential	142	DU	199	28,258	107
P-1	Park	7.6	AC	500	3,800	14
P2/CPF-1	Park	1.1	AC	500	550	2
P3/CPF-2	Park	0.7	AC	500	350	1
TOTAL					**225,348**	**850**

[1] Unit demand factors from Chula Vista Subdivision Manual (July 2001)

Source: PBS&J

Table J.4
Village 7 - Permanent Condition
Wolf Canyon Sewer Basin Sewage Flows and EDUs by Unit ID

Neighborhood ID	Land Use	Number	Units	Generation Rate[1] (gpd/Unit)	Average Daily Flow (gpd)	EDU
R-3	SF Residential	290	DU	265	76,850	290
R-4	SF Residential	37	DU	265	9,805	37
R-6	MF Residential	187	DU	199	37,213	140
R-7	MF Residential	119	DU	199	23,681	89
S-3	Elementary School	800	Students	15	12,000	45
S-1	High School	2,400	Students	20	48,000	181
S-2	Middle School	1,400	Students	20	28,000	106
MU-1	Mixed Use/Com'l	3.7	AC	2,500	9,250	35
TS-1	Town Square	1.9	AC	2,500	4,750	18
CPF-2b	Commercial	1.0	AC	2,500	2,500	9
CPF-3	Commercial	0.2	AC	2,500	500	2
CPF-4	Commercial	1.1	AC	2,500	2,750	10
TOTAL					**255,299**	**963**

[1] Unit demand factors from Chula Vista Subdivision Manual (July 2001)

Source: PBS&J

Table J.5 presents the estimated average Project wastewater flow generation and equivalent dwelling units for the interim sewer system in the Poggi Canyon Sewer Basin. The average projected flow rates are approximately 346,242 gpd (1,307 EDUs).

Table J.5
Interim Condition Poggi Canyon Sewer Basin Sewage Flows and EDUs by Unit ID

Neighborhood ID	Land Use	Number	Unit	Generation Rate[1] (gpd/Unit)	Average Daily Flow (gpd)	EDU
R-1	SF Residential	351	DU	265	93,015	351
R-2	SF Residential	375	DU	265	99,375	375
R-5	MF Residential	142	DU	199	28,258	107
R-6	MF Residential	187	DU	199	37,213	140
R-7	MF Residential	119	DU	199	23,681	89
S-1	High School	2,400	Students	20	48,000	181
S-3	Elementary School	800	Students	15	12,000	45
P-1	Park	8	AC	500	3,800	14
P2/CPF-1	Park	1.1	AC	500	550	2
P3/CPF-2a	Park	0.7	AC	500	350	1
TOTAL					**346,242**	**1,307**

[1] Unit demand factors from Chula Vista Subdivision Manual (July 2001)

Source: PBS&J

B. Poggi Canyon Sewer Basin:

Wastewater generated within the Poggi Canyon Sewer Basin is conveyed to the City of San Diego Metropolitan Wastewater Department (Metro) sewerage system via the Poggi Canyon Interceptor, which generally follows from Olympic Parkway to Brandywine Avenue and then extends southwesterly through existing development to a temporary connection to the Date-Faivre Trunk Sewer south of Main Street. Following completion of the western portion of the planned Salt Creek Interceptor in Otay Valley Road, the Poggi Canyon Interceptor will be connected to the Salt Creek Interceptor near the intersection of Palm Avenue and Main Street and the temporary connection to the Date-Faivre Trunk Sewer will be removed.

Design criteria, including minimum pipe diameters and slopes, for the Poggi Canyon Interceptor was provided in the *Poggi Canyon Basin Gravity Sewer Basin Plan dated 1997 by Wilson Engineering.* The Basin Plan estimated average sewer flows from Village 7 to the Poggi Canyon Interceptor equal to 78,060 gpd (295 EDUs) at 265 gpd/EDU. The *Poggi Canyon Sewer Basin Plan Update and Pumped Flow Analysis dated 2002 by PBS&J*, calibrated the existing sewer system model, which included the Poggi Canyon Interceptor and Date-Faivre Trunk Sewer, with metered flow data. The calibrated generation rates from existing development were estimated to be 215 gpd/EDU. The City elected to evaluate the remaining capacity in the Poggi Canyon Interceptor sewer using a combination of their Subdivision Manual for new development and sewer flow meter data to assess existing pipe capacity. Using this method, Poggi Canyon is estimated to have adequate capacity for all of the proposed wastewater flows from Village 7.

The Basin Plan Update additionally identified that approximately 660 feet of the existing Poggi Canyon Interceptor located under I-805 (Reach 205) may reach capacity after

2005. The City has included improvement of this reach in its current CIP. The improvements will be funded through the existing Development Impact Fee (DIF). It is anticipated that the section of the Interceptor crossing I-805 will be constructed prior to the development of the Village 7 Development. After Reach 205 is completed, the next critical reach in the sewer is identified as P270 located at Brandywine Avenue and Olympic Parkway. This reach is estimated to have adequate capacity for all of the proposed permanent units in the Project. The projected average project flow to the Poggi Canyon Basin is 225,348 gpd.

The number of remaining EDUs to be built within the Basin was estimated by PBS&J. The existing and planned units are referred to as committed units with respect to capacity rights in the Poggi Interceptor. The PBS&J sewer study assumed that units completed at the beginning of November would be sold and occupied by the time the peak flow rate was measured on Thanksgiving Day. The developed units were then subtracted from the "committed" units verified by the City.

Table G.6 shows the "committed" units for entitled and non-entitled developments in the Poggi Canyon Basin, as well as, proposed additional units in Villages 2 and 7 above the committed number of units for these developments. The entitled EDUs include all development in the Basin that is either built or has at a minimum an approved Sectional Planning Area Plan. The non-entitled EDUs include Village 7, Village 7 and the northern portion of the Eastern Urban Center (EUC). Pursuant to a City request, PBS&J used the 1997 Basin Plan as the basis for determining the number of committed EDUs for the non-entitled villages.

Table J.6
Poggi Canyon Sewer Basin
Proposed Units Remaining to be built by Development

Development	Committed Units			Proposed Units	
	Total Units (EDU)	Constructed Units (EDU)	Remaining Units (EDU)	Additional Units (EDU)	Total with Additional Units (EDU)
Entitled Developments					
West of I-805	813	813	0		813
Sunbow I	952	&52	0		952
Sunbow II	1,986	1,533	453		1,986
Village 1 West	520	317	203		520
Village 1 ORC	1,120	986	134		1,120
East Lake Land Swap Area/ EastLake Greens	2,007	1,039	968		2,007
Village 5 ORC	592	215	377		592
Village 6	2,054	53	2,001		2,054
Village 1/5 McMillin	312	312	0		312
Freeway Commercial	1,132	0	1,132		1,132
Non-entitled Developments					
Village 2	1,201	0	1,201	1,001	2,202
Village 7	295	0	295	555	850
Eastern Urban Center	189	0	189		189
TOTAL	**13,173**	**6,220**	**6,953**	**1,556**	**14,729**

Source: PBS& J

C. Poggi Canyon Sewer Capacity:

The PBS&J sewer study conclusion regarding the available capacity in Reaches 205 and P270 is summarized in Table G.7 below. The maximum capacities in the two reaches are very close since the pipe diameters are the same (18-inches) and the difference in slope is very slight for both Reach 205 and P270.

Table J.7
Excess Capacity in Threshold Reaches

Reach	Max Capacity[1]	Recorded Flow[2]	Current Remaining Capacity		Olympic Pkwy Pump Station[4]	Available Capacity in EDUs[5]	
	Qmax (gpm)	Qpeak (gpm)	Qpeak (gpm)	Qavg[3] (gpm)	EDU	215 gpd/EDU	265 gpd/EDU
205	3,435	1,819	1,616	903	2,496	8,544	7,403
P270	3,684	1,510	2,174	1,235	2,496	10,768	9,207

1 Maximum capacity calculated by application of Manning's equation and based on a maximum d/D of 0.85.
2 Reach 205 recorded peak flow from November 27, 2003, at Manhole No. 6837. Reach P270 peak flow estimated from Reach P270 record data.
3. Used peaking factors of 1.78 and 1.76 for reaches 205 and P270, respectively, based on CVDS18.
4. Projected EDUs based on Olympic Parkway pump flow data of September 8, 2003 and generation rate of 265 gpd/EDU.
5. Available capacity assumes EDUs tributary to Olympic Parkway Pump Station are not conveyed to Poggi Canyon Interceptor

Source: PBS& J

According to the PBS&J sewer study the Olympic Parkway Pump Station receives flow from approximately 2,496 EDUs into the Poggi Canyon Basin at the end of 2003 (per house closing information provided by developers as of September 8, 2003). After the Salt Creek Interceptor is completed, the flow will gravity permanently into the Salt Creek Basin and free up capacity in the Poggi Canyon Basin. The available capacity in Table G.7 accounts for this transfer of flow.

The Eastlake Parkway Pump Station currently pumps to Telegraph Canyon, but will ultimately flow by gravity into Poggi Canyon after pumped flows from Salt Creek Basin leave the Poggi Canyon Basin. The PBS&J sewer study capacity analysis assumes all of the proposed 2,007 EDUs from the Eastlake Development in Table G.6 are tributary to the Poggi Canyon Basin.

Table G.8 shows the remaining capacity in the Poggi Canyon Interceptor Sewer after all of the "committed" units are sewered to the basin.

Table J.8
Remaining Poggi Canyon Basin Capacity
in Threshold Reaches minus Committed Units

Reach	Remaining Pipe Capacity	
	215gpd/EDU	265 gpd/EDU
205	1,591	450
P270	3,815	2,254

The PBS&J basin capacity analysis indicates that the Poggi Canyon Interceptor Sewer will have adequate capacity to accept the proposed 850 EDUs from Village 7 (see Table G.6). Table G.8 shows the total number of additional units that can be sewered by the Interceptor above and beyond the number of committed units before exceeding the maximum capacity. The number of proposed additional units for Village 7 is 555 EDUs per Table G.6. The first threshold, Reach 205 at a generation rate of 265 gpd/EDU, provides a remaining capacity of 824 EDUs, which is above the number of proposed additional units. Therefore, the Poggi Canyon Interceptor may receive all of the proposed flow from Village 7 including an additional 269 EDUs before reaching maximum capacity.

The development of some neighborhoods within Village 7 will be contingent upon the completion of certain regional facilities or implementation of temporary diversions. Village 7 neighborhoods R-6, R-7, S-1 and S-3 are planned to temporarily sewer north to the Poggi Basin until the future Wolf Canyon Trunk Sewer is built. Approximately 456 EDUs more than the proposed 850 EDUs will be sewered north to the Poggi Basin on an interim basis. Of this amount, 295 EDUs are committed per the 1997 Basin Plan. Therefore, the total additional units during the interim condition are 1,011 EDUs. At 1,011 EDUs there are 187 EDUs above the threshold at Reach 205 with a generation rate of 265gpd/EDU. If Reach 205 were complete, the Poggi Canyon Interceptor Sewer would have adequate capacity to accommodate all of the interim flows. In addition, phasing of developments in the Poggi Canyon Basin will free up capacity in the Interceptor sewer until regional facilities are in place.

D. Wolf Canyon Sewer Basin:

The City evaluated several regional sewer alternatives for the Wolf Canyon Basin. Subsequent to the evaluation, the future Wolf Canyon Trunk Sewer alignment was moved out of Wolf Canyon and into a planned improved roadway, Rock Mountain Road. This new alignment will significantly reduce the environmental impacts and capital costs associated with construction in a canyon. The conceptual grading in the project and sewer study was modified to reflect this revision.

Wastewater generated within the Wolf Canyon Basin will drain to the future trunk sewer in Rock Mountain Road. The trunk sewer will connect to the existing Salt Creek Interceptor at a location approximately 3,000 feet east of Heritage Road in the Otay River Valley. From the connection point, flows will be conveyed in the Salt Creek Interceptor to Metro facilities located west of I-5. Completion of the Salt Creek Interceptor is expected in 2004. The projected average project flow to the Wolf Canyon Basin is approximately 255,299 gpd.

II.5.4.8.6 Recommended Sewerage Facilities

Sewer facility improvements required to serve the Otay Ranch Village 7 project include on-site gravity sewer lines and contributions for the construction of the Poggi Canyon Interceptor. The sizing of on-site sewer lines should be verified during the improvement plan preparation process when slopes and alignments for sewer lines have been established. This chapter provides a discussion of the impact fees to be paid and the on-site facilities necessary to serve the Otay Ranch Village 7 project.

II.5.4.8.6.1 Otay Ranch Village 7 Improvements

Exhibit 13 illustrates the conceptual on-site sewer collection system for the Village 7 SPA based on the interim condition for the Poggi Canyon Basin. The interim sewer main in the looped road will divert flows from Neighborhoods R-6, R-7, S-1 and S-3 north to the backend of the proposed permanent sewer, which ultimately connects to an existing sewer manhole at the intersection of Magdalena Avenue and Birch Avenue.

Sewer facility improvements required to serve the Village 7 SPA include on-site gravity sewer mains and contributions for the construction of the Poggi Canyon and Salt Creek Interceptors, and potentially the Wolf Canyon Trunk Sewer. Flows generated in the Poggi Canyon Basin will flow to planned 8 to 12-inch sewer mains in La Media and Birch Roads that connect to the Poggi Canyon Interceptor in Olympic Parkway. The permanent sewer collection system in Exhibit 14 shows the backbone mains at ultimate buildout of Village 7 SPA.

Based on conceptual grading, permanent sewer in the western portion of the Wolf Canyon Basin collects flows in the south connector road between La Media Road and Magdalena Avenue, and then diverts flow south to Rock Mountain Road. Pipe sizes are estimated at 8 inches based on wastewater generation flows. At the time of the PBS&J sewer study, tentative maps were not available so approximate lengths of deep sewers in this area are not included. The sizing of on-site sewer lines will be determined during development of improvement plans for the Project when slopes and alignments for sewer lines have been established.

II.5.4.8.6.2 Otay Ranch Village 7 Phasing

A. **Poggi Basin Development**

In the permanent condition, the northern portion of the Project (R-1, R-2, R-5, P-1, P2/CPF-1, and P3/CPF-2) will sewer to planned mains in Birch Road and La Media Roads, as shown in Exhibit 14. These mains will be constructed as part of the Village 6 subdivision and are expected to be completed and operational prior to development of the Village 7 project. The total proposed EDUs for Village 7 at ultimate buildout is 850 EDUs. With approximately 295 EDUs committed per the 1997 Basin Plan, an additional 555 EDUs will be tributary to the Poggi Canyon Basin. Based on the hydraulic analysis, the Poggi Interceptor Sewer would have sufficient capacity to handle only 450 additional units from Village 7. The remaining 105 EDUs that are considered additional may be tributary to the Poggi Canyon Interceptor Swere until the Year 2012 when the EUC is anticipated to begin construction. This will free up 189 EDUs in the Poggi Canyon Basin until Reach 205 is upsized. At which point, all of the proposed units from Village 7 may be tributary to the Basin.

Until the Wolf Canyon Trunk Sewer is completed, the southeastern quadrant (R-6, R-7, S-1 and S-3) will require an interim sewer to the Poggi Basin via a deep sewer in the loop road, as shown in Exhibit 13. The maximum number of additional units above and beyond the committed units in Village 7 that will be tributary to the Poggi Canyon Basin on an interim basis is 1,011 EDUs. This exceeds the remaining capacity in Reach 205 by 561 EDUs. Once Reach 205 is improved, there will be sufficient capacity to accept all the temporary flow.

Assuming Reach 205 and the Wolf Canyon Trunk Sewer are not built prior to development of the southeastern quadrant, the timing of developments within the basin may free up capacity within the Poggi Interceptor Sewer to accommodate potential temporary flows. For instance, the latest estimated development timeframe for committed EDUs in Sunbow II (Sunbow Industrial) and the EUC is after 2012. This will free up 642 EDUs in the basin for additional units from Village 7. Once Reach 205 is constructed, the sewer basin would be able to handle a total of 2,254 additional units before the second threshold at Brandywine Avenue would be exceeded. With development of Sunbow Industrial and EUC in the distant future, the Poggi Basin has adequate capacity to accept all of the temporary flows from Village 7. Further, the remaining capacity within the Poggi Basin, are based on a conservative planning generation rate of 265 gpd/EDU. Using the lower generation rate of 215 gpd/EDU, the Poggi Canyon Basin would be able to accept all of the proposed and temporary EDUs in Reach 205 and P270 with additional capacity remaining.

B. <u>Wolf Canyon Basin Development</u>

Portions of the Project that lie within the Wolf Canyon Basin will sewer to the future trunk sewer in Wolf Canyon through a planned main in La Media Road and Magdalena Avenue. The southern portion of the Project (Neighborhoods R-3, R-4, S-2, and commercial land uses) will require the completion of future mains in Rock Mountain Road or other alignments to convey flows to the Salt Creek Interceptor.

II.5.4.8.7 Financing Sewerage Facilities

City of Chula Vista Development Impact Fees (DIF) will fund construction of regional sewer facilities, including the Poggi Canyon and Salt Creek Interceptors and potentially a Wolf Canyon trunk sewer. Village 7 development within the Poggi Canyon Sewer Basin will be required to pay the Poggi Canyon DIF and development within the Wolf Canyon Basin will be required to pay the Salt Creek DIF. These fees were established in the *Poggi Canyon Gravity Sewer Basin Plan* and the *Salt Creek Basin Study, 1994 by Wilson Engineering*, and through City of Chula Vista Ordinances 2716 and 2617, respectively. Table J.9 summarizes the current Poggi Canyon Basin Impact Fees and Table J.10 presents the current Salt Creek & Wolf Canyon Basin fees, which are being updated.

Table J.9
Village 7 SPA Poggi Canyon Basin Impact Fees[29]

Neigh.	Land Use	Impact Fee	Phase								Total Fees
			White		Blue		Red		Greeen		
			DU	Fees/Phase	DU	Fees/Phase	DU	Fees/Phase	DU	Fees/Phase	
Residential											
R-1	SFD	$400/EDU		$0	346	$138,400		$0		$0	$138,400
R-2	SFD	$400/EDU		$0		$0	375	$150,000		$0	$150,000
R-3	SFD	$400/EDU		$0		$0		$0	22	$8,800	$8,800
R-4	SFD	$400/EDU		$0		$0		$0	13	$5,200	$5,200
R-5	MF	$300/EDU		$0	142	$42,600		$0		$0	$42,600
R-6	MF	$300/EDU		$0	187	$56,100		$0		$0	$56,100
R-7	MF	$300/EDU		$0	119	$35,700		$0		$0	$35,700
Subtotal				**$0**	**794**	**$274,800**	**375**	**$150,000**			**$438,800**

[29] After issuance of the 295 EDU, each subsequent EDU shall pay the Salt Creek Interceptor DIF in effect at the time of issuance, whether or not the unit is in the basin of the Salt Creek Interceptor

Table J.9 Continued Village 7 SPA Poggi Canyon Basin Impact Fees											
Neigh.	Land Use	Impact Fee	Phase								Total Fees
			White		Blue		Red		Green		
			Site	Fees/Phase	Site	Fees/Phase	Site	Fees/Phase	Site	Fees/Phase	
Non-Residential											
CPF-1	CPF	$3,572/site		$0	1	$3,572		$0		$0	$3,572
CPF-2a	CPF	$3,572/site		$0		$0	1	$3,572		$0	$3,572
CPF-2b	CPF	$3,572/site		$0		$0		$0	1	$3,572	$3,572
S-1	High School	$68,572 /site	1	$68,572		$0		$0		$0	$68,572
S-3	Elem. School	$12,856 /site		$0	1	$12,856		$0		$0	$12,856
P-1	Neigh Park	$716/Acre		$0	7.6	$5,442		$0		$0	$5,442
Subtotal				**$68,572**		**$21,870**		**$3,572**		**$3,572**	**$97,586**
Total				**$68,572**		**$296,670**		**$153,572**		**$17,572**	**$536,386**

Table J.10 Village 7 SPA Salt Creek Basin Impact Fees											
Neigh.	Land Use	Impact Fee	Phase								Total Fees
			White		Blue		Red		Green		
			DU	Fee/Phase	DU	Fee/Phase	DU	Fee/Phase	DU	Fee/Phase	
Residential											
R-1	SFD	$284		$0	346	$140,400		$0		$0	$140,400
R-2	SFD	$284		$0		$0	375	$106,500		$0	$106,500
R-3	SFD	$284		$0		$0		$0	22	$6,248	$6,248
R-4	SFD	$284		$0		$0		$0	13	$3,692	$3,692
R-5	MF	$213		$0	142	$30,246		$0		$0	$30,246
R-6	MF	$213		$0	187	$39,831		$0		$0	$39,831
R-7	MF	$213		$0	119	$25,347		$0		$0	$25,347
Subtotal				$0	794	$235,824	375	$106,500		$9,940	$352,264
Non-Residential											
CPF-1	CPF	$2,840/site		$0	1	$2,840		$0		$0	$2,840
CPF-2a	CPF	$2,840/site		$0		$0	1	$2,840		$0	$2,840
CPF-2b	CPF	$2,840/site		$0		$0		$0	1	$2,840	$2,840
S-1	H.S.	$1,136/site	1	$1,136		$0		$0		$0	$1,136
S-3	E.S.	$1,136/site		$0	1	$1,136		$0		$0	$1,136
P-1	N.P.	$716/acre		$0	7.6	$5,442		$0		$0	$5,442
Subtotal				$1,136		$9,418		$2,840		$2,840	$16,234
Total				**$1,136**		**$245,242**		**$109,340**		**$12,780**	**$368,498**

Tables J.9 and J.10 are fee estimates only and are subject to change as they are amended from time to time. Further, fees for residential units may be different depending upon the actual number of building permits that are pulled.

II.5.4.8.8 Threshold Compliance and Recommendations

Facilities to accommodate sewer flows have been identified in the PBS&J sewer report. The construction of new sewer lines must be phased in before the construction of streets.

It is recommended that flow monitoring within the Poggi Canyon Sewer Basin should be performed as a confirmation that the metered flow does not exceed the basin capacity.

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.

The Reach 205 upgrade to the Poggi Canyon Trunk Sewer shall be completed prior to issuance of any building permit that will exceed 1635 EDU's cumulative for all projects utilizing the Poggi Canyon Trunk Sewer, in excess of entitled and reserved units.

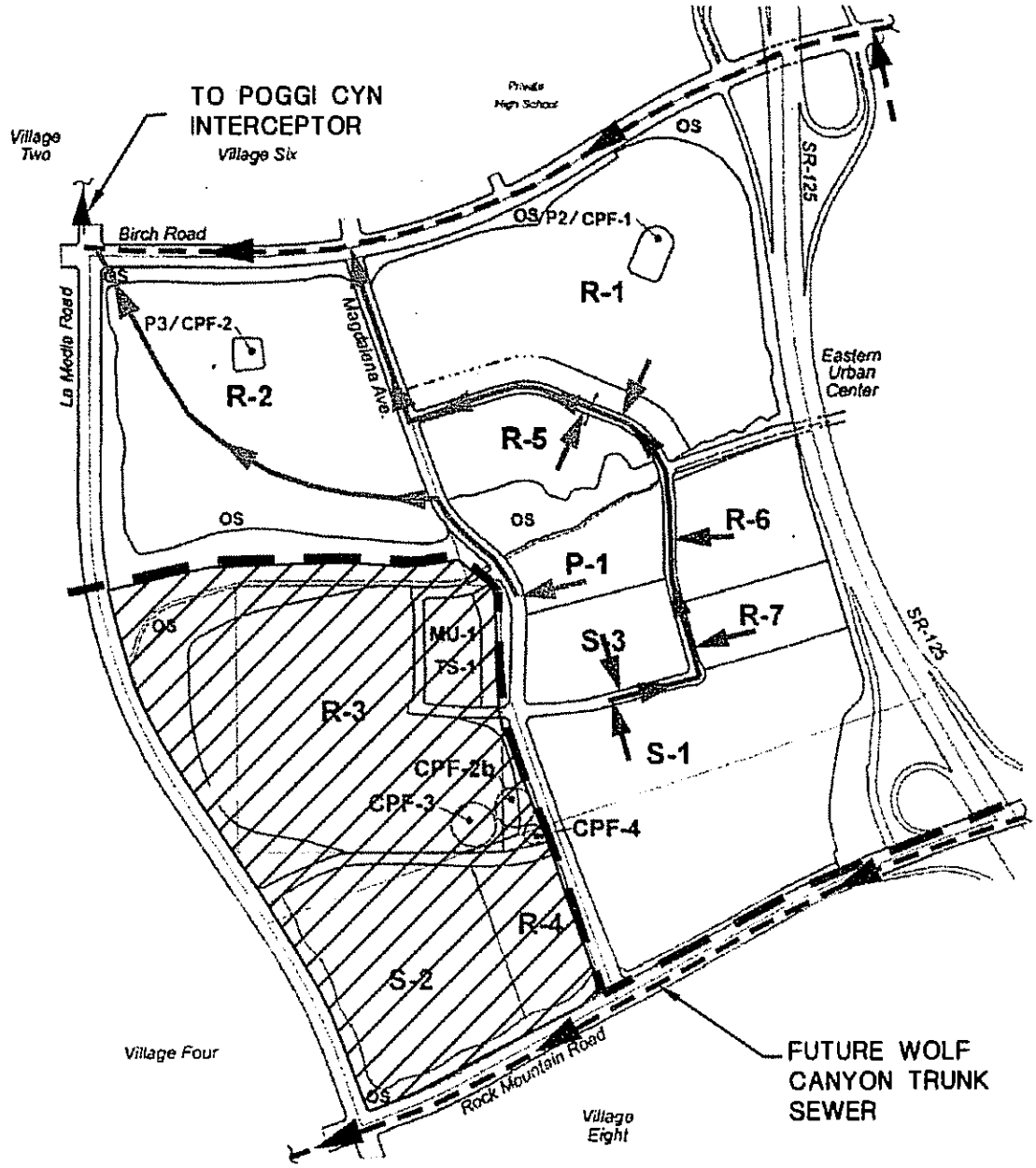
Prior to the approval of any final map within the Village 7 SPA containing the lot that, when developed in accordance with the adopted SPA plan, will cause the total number of EDUs within the basin of the Poggi Canyon Trunk Sewer to exceed 3,439 in excess of entitled and reserved units, the Rock Mountain Road Sewer improvements necessary to connect the Project to the Salt Creek Interceptor shall be secured.

Prior to the issuance of any building permit within the Project that will cause the total number of permitted EDUs within the basin of the Poggi Canyon Trunk Sewer to exceed 5, 000 in excess of entitled and reserved units, the Rock Mountain Road Sewer improvements necessary to connect the Project to the Salt Creek Interceptor shall be constructed.

Prior to issuance of each building permit for EDUs 1 through 295 in Village 7, the Poggi Canyon Gravity Sewer DIF in effect at the time of issuance shall be applied to each building permit. After issuance of the 295 EDU, each subsequent EDU shall pay the Salt Creek Interceptor DIF in effect at the time of Issuance, whether or not the unit is in the basin of the Salt Creek Interceptor (see Tables J.9 and J.10).

The applicant for the Otay Ranch Village 7 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 applicable 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.



LEGEND

- OFFSITE SEWER
- POGGI CANYON SEWER BASIN BOUNDARY
- INTERIM / PERMANENT SEWER MAIN
- INTERIM SEWER MAIN
- AREA TO BE SERVED BY FUTURE WOLF CANYON TRUNK SEWER

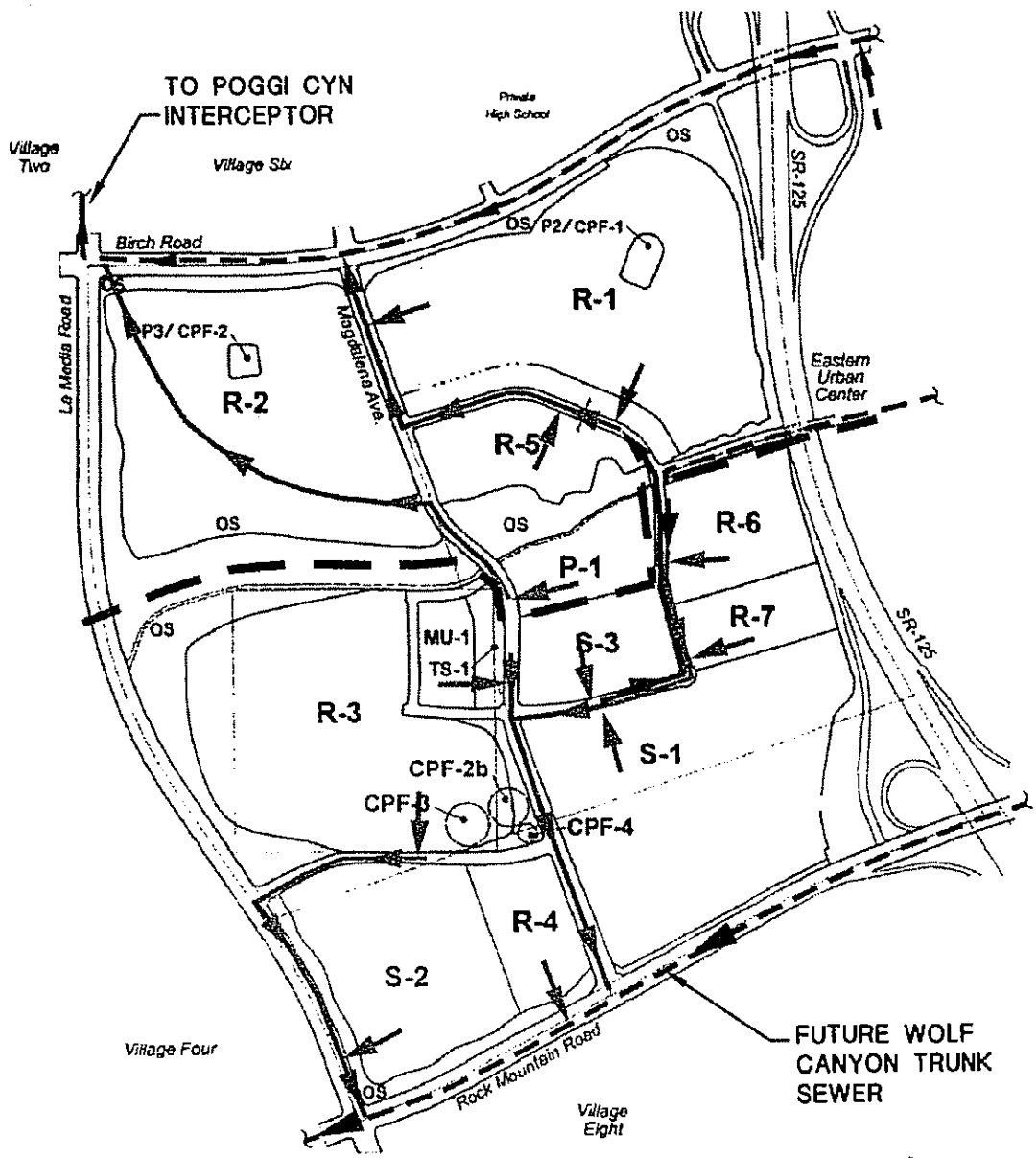
N

NO SCALE

INTERIM SEWER COLLECTION SYSTEM

Note: Refer to the Site Utilization Plan on page 15 of this PFFP for approved SPA land uses.

Exhibit 13



PERMANENT SEWER COLLECTION SYSTEM

Note: Refer to the Site Utilization Plan on page 15 of this PFFP for approved SPA land uses.

Exhibit 14

II.5.4.9 DRAINAGE

II.5.4.9.1 Threshold Standard

1. Storm water flows and volumes shall not exceed City Engineering Standards.

2. The GMOC shall annually review the performance of the City's storm drain system to determine its ability to meet the City's goals and objectives.

II.5.4.9.2 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 Public Facilities Plan Flood Control Summary Report,* dated March 1989 (Phase II) provides details for the city planned drainage facilities.

Otay Ranch Village 7 drainage improvements are identified in the following two reports:

1. *Preliminary Drainage Study, Otay Ranch Village 7, Village of Vista Verde, May 24, 2004 by P&D Consultants.*
2. *Master Drainage Study for Otay Ranch Village 7, May 20, 2004, by Hunsaker & Associates.*

Otay Ranch Village 7 water quality improvements are identified in the following two reports:

1. *Preliminary Water Quality Technical Report for Otay Ranch Village 7 in the City of Chula Vista, revised May 24, 2004 by Rick Engineering Company.*
2. *Preliminary Water Quality Technical Report for Otay Ranch Village 7, Neighborhood R-2 and Village 4 Park Site, May 21, 2004 by Hunsaker & Associates.*

The *Preliminary Drainage Study, Otay Ranch Village 7, Village of Vista Verde, May 24, 2004 by P&D Consultants* was prepared in conjunction with the SPA and Tentative Map applications for the McMillin Ownership of the Otay Ranch Village 7 project. Specifically it was prepared for the eastern one half of Village 7 (east of Magdalena Street), which includes both the McMillin and the Sweetwater Union High School Site. The intent of the P&D Consultants study is to establish general design procedures and calculations, identify preliminary flows and major drainage facilities and set preliminary guidelines for the subsequent phase(s) of the project. The scope of P&D Consultants study was not intended for final engineering and does not include a detailed analysis of all related drainage facilities (i.e., peak run off at each inlet, outlet, interceptor, and concentration or confluence point). Additional drainage analysis may be required by the City Engineer during the tentative map phase of the project to demonstrate the adequacy of the proposed on-site storm drain system(s). Future drainage reports will be prepared as required by the City Engineer for the final engineering phase(s) of the project. Finally, the project will be required to comply with all current regulations related to water quality including best management practices (BMPs) for the construction and post construction phases of the project.

Master Drainage Study for Otay Ranch Village 7, May 20, 2004, by Hunsaker & Associates was prepared in conjunction with the SPA application for the Otay Project, L.P. ownership. The purpose of the Hunsaker report is to:

- Prepare hydrologic models to quantify existing and developed site runoff from the Village 7 site to Wolf Canyon.
- Design detention facilities to maintain developed condition peak flowrates from the site area below pre-developed peak flowrates to Wolf Canyon Creek.

The Otay Ranch Village 7 project is under the jurisdiction of the San Diego Regional Water Quality Control Board (SDRWQCB). The Otay Ranch Village 7 project is 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 Regional Water Quality Control Board (RWQCB) for the region in which the project is located.

The Preliminary Water Quality Technical Reports were prepared in conjunction with the Otay Ranch Village 7 SPA. The reports summarizes storm water quality requirements for post-development runoff the Village 7 SPA Plan. The Rick Engineering report addresses McMillin's ownership and the Hunsaker report addresses the Otay Project, L. P. ownership.

II.5.4.9.3 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.

II.5.4.9.4 Existing Conditions

A. Storm Drainage

The *City of Chula Vista Public Facilities Plan, Flood Control Summary Report, March, 1989, by the City of Chula Vista*, shows fifteen major drainage basins in Chula Vista. These drainage basin boundaries were determined by existing topography, drainage conditions and land uses. Four of these are essentially developed and not expected to have significant changes in runoff. Eleven drainage basins are east of I-805 with one of the basins, Long Canyon, is mostly developed to the predicted densities of the general plan. Some of the remaining basins are experiencing development and the subsequent changes in drainage conditions.

The City's Drainage Master Plan analyzed current and future requirements for drainage facilities. Because drainage facilities are directly related to the type and location of future development, it is not possible to determine which specific improvements will be required until the development project is presented and reviewed by staff at which time specific requirements will be determined and applied to the project.

The terrain of Village 7 is very similar to the adjacent Village 6 drainage area. The terrain is covered by heavily grazed lands that consist of rolling hills with arroyos

draining into larger canyons flowing to the south and west, away from the Otay Reservoir Basin. The natural drainage basin for this portion of the Otay Ranch is a combination of one subbasin flowing directly into Wolf Canyon and four subbasins draining south into unnamed tributaries that eventually drain into Wolf Canyon and one sub-basin draining north into Poggi Canyon. The northern portion of Neighborhoods R-1 and R-2 of the Village 7 SPA drain towards Poggi Canyon. The balance of the site is within the Wolf Canyon drainage basin, which ultimately discharges into the Otay River approximately 1.6 miles southwest of the study area.

Immediately east of the Village 7 project and across the planned SR 125 alignment is located the future Eastern Urban Center (EUC), a part of the Village 12 SPA. The majority of the EUC is contained within the natural Wolf Canyon drainage basin, and will ultimately drain through a drainage structure under SR 125 and through Village 7.

Exhibit 15, Preliminary Existing Drainage Basin Boundaries, shows several subbasins and portions of subbasins drain the Village 7 SPA Plan project site. The largest subbasin on the project site, which is approximately 384 acres in size, accepts discharge from the central portion of the project area, as well as part of the Eastern Urban Center (EUC) which is east of the project area, outside of the project boundaries. The subbasin discharges outfall on the west side of the Village 7 SPA Plan project area into Wolf Canyon. Another subbasin located directly south of the one referenced above drains a 218-acre area that constitutes the southern portion of the project site. This subbasin drains westerly into Wolf Canyon. Additionally, a 50-acre northern portion of the project area drains north into Poggi Canyon.

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), 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 San Diego Regional Water Quality Control Board (SDRWQCB), requires the development and implementation of storm water regulations addressing storm water pollution issues in development planning and construction associated with private and public development projects.

The Preliminary Water Quality Technical Reports analyze the compliance of the storm water quality requirements for post-development runoff from the McMillin and Otay ownership of the Otay Ranch Village 7 project. McMillin Companies owns the northeast portion of the Otay Ranch Village 7 project site (east of Magdalena Road). Otay Project, L. P. owns the northwest portion of the Village 7 SPA (west of Magdalena Road). The reports have been revised per city engineering comments to include and address all the requirements outlined in the Model Standard Urban Storm Water Mitigation Plan (SUSMP).

The McMillin Village 7 project consists of the construction of approximately 790 dwelling units, an elementary school, neighborhood park, a high school site, and a series of extended detention basins along Wolf Canyon on approximately 180 acres. This project is subject to NPDES requirements. NPDES requirements are contained in Section

402(p) of the Federal Clean Water Act. These requirements are implemented through permits issued by the SWRCB or the local RWQCB and the City of Chula Vista.

II.5.4.9.5 Proposed Facilities

A. Storm Drainage

Upon development of the Village 7 site, a portion of the existing Wolf Canyon area is planned as a naturalized open basin area. To limit the increased runoff to predevelopment levels, detention basins are proposed to be constructed. The naturalized open basin area will function as a drainage facility providing both detention and water quality treatment areas, integrated into an environmental and scenic feature. To avoid the construction of a series of small detention basins within the EUC, the Village 7 Wolf Canyon basin (between Magdalena Avenue and SR 125) will be sized to retain runoff from the EUC as well as Village 7.

For the flows from the EUC, the P&D Consultants study accepted the drainage basins and drainage flows from a report entitled *Drainage Study to Size Pipe between E.U.C. and Village 7, dated February 11, 2004,by Rick Engineering Company.* The 100-year storm discharge of 492 cubic feet per second (cfs) per the report was used as the developed flow from the EUC under the SR 125, and into the Village 7 project area.

A small northerly portion of the Village 7 Neighborhood R-1 and the EUC drains toward Birch Road into Poggi Canyon, which was included and identified in the report titled *Otay Ranch SPA Village 6 Preliminary Drainage Study Major Drainage Patterns and Facilities, dated September 4, 2001.* This area is approximately 42 acres of the 300 acres of the drainage basin that drains to Poggi Canyon. Approximately 16 acres of the northerly portion of Neighborhood R-2 drains towards Poggi Canyon.

The northern portion of the Village 7 Neighborhood R-1 site, when developed, will drain through pipes in the local streets to Birch Road, westward to La Media Road, and onward to the Poggi Canyon drainage facilities. The total developed 100-year runoff for this basin is 87 cfs. This basin is the onsite portion of the larger drainage basin to the north of approximately 300 acres that drains into Poggi Canyon. This developed runoff has already been addressed in the report *Otay Ranch Village 6 Preliminary Drainage Study Major Drainage Patterns and Facilities.* Detention for the developed runoff will be provided in the Poggi Canyon regional detention facility.

The development of the Otay Ranch Village 7 Neighborhood R-2 site will include the construction of single-family residential homes. Development of the site will divert approximately 16 acres from Poggi Canyon to Wolf Canyon.

The main drainage course through Village 7 shall occur through Wolf Canyon. The offsite runoff from the EUC shall enter Village 7 on the east under the proposed SR 125. Exhibit 16 illustrates the developed drainage basin boundaries for the McMillin ownership of Village 7. The total developed 100-year flow for Basin A is 714 cfs, which includes the offsite drainage from the EUC (see Exhibit 16). The runoff from this basin will be routed through a series of detention areas to provide a maximum 100-year discharge of 243 cfs at me discharge point, equal to the existing pre-developed flow at the westerly boundary of the project. All of the storm runoff from Basin A will be routed through the detention areas, with the exception of a minor amount of runoff within

Magdalena Avenue. This runoff will be routed directly to the west, bypassing the ponds. The amount of runoff from Magdalena Avenue is not considered significant and will not increase the total discharge above the pre-developed condition.

The remaining drainage area, Basin B-l, shall flow from the site to the future southern extension of Magdalena Avenue and to Rock Mountain Road, ultimately flowing to the southern tributary of Wolf Canyon. This is a future school site and will include approximately 10 acres of natural area upstream of the developed school parcel until SR 125 is built. The runoff from the school site was modeled for ultimate conditions. The total 100-year developed runoff is 168 cfs. To mitigate the increase in Basin B-l, detention within the school parcel will be provided as part of the school site development. A minor amount of runoff within Magdalena Avenue and Rock Mountain Road will drain directly west; however, this flow is not considered significant with regard to overall detention requirements for Basin B-l (see Table K.1).

Table K.1
Summary of Runoff Estimates for McMillin Ownership of Village 7

Location	Existing Condition		Developed Condition	
	Area (Acres)	Q100 (cfs)	Area (Acres)	Q100 (cfs)
Basin A-1 (EUC)*	153	201	164	491
Basin A-2 North			45	84
Basin A-2 South			36	97
Basin A-2 Ponds			17	42
Subtotal Basin A-2	90	42	98	223
Total Basin A	243	243	262	714
Basin B-l	81	116	71	168
Basin C-l	59	83	42	87

* From the report titled *Drainage Study to Size Pipe Betweeen EUC and Village 7* *Source: P&D Consultants.*

The future onsite drainage facilities for the McMillin ownership of Village 7 were not specifically addressed by the P&D Consultants study. The onsite facilities consisting of storm drain pipes, inlets, cleanouts, headwalls, drainage ditches, etc. will be sized and designed during the final engineering and permitting phase of the project in accordance with City of Chula Vista standards. A detailed drainage report shall be prepared at that time which will size all onsite drainage facilities to accommodate the ultimate storm flows.

Future tentative mapping and final design for Village 7 will include preparation of separate drainage reports in accordance with previous reports and the City of Chula Vista's standards and requirements.

All runoff from the developed Otay Project L.P. ownership of Village 7 will be routed via storm drain to the detention and water quality basins located just upstream of the La Media culvert crossing (see Exhibit 17). A storm drain will intercept routed runoff from the McMillin portion of Village 7 and convey this flow (256 cfs) beneath the basins. This pipe will also convey the Village 7 basin outflows and will discharge on the western side of La Media Road into the existing Wolf Canyon channel. Runoff from Wolf Canyon Creek will ultimately discharge to the Otay River east of Otay Village 3.

Table K.2 summarizes contributing areas and 100-year flows for existing and developed conditions for the site's major discharge locations. As shown in the table, the proposed detention facility mitigates the 100-year peak flowrates well below the pre-developed peak flowrates from the study area at the proposed La Media crossing. The outflow of 109 cfs from the detention basin, in the Otay Project L. P. ownership of Village 7, is significantly lower than the pre-developed study area 100-year flow of 132 cfs at the same location (see Exhibit 16).

TABLE K.2
Contributing Areas and 100-year flows
for existing and developed conditions

Location	Node Number	Existing Conditior Drainage Area (acres)	Developed Condition Drainage Area (acres)	Difference (acres)	Existing Condition 100-Year Flow (cfs)	Developed Condition 100-Year Flow (cfs)	Difference (cfs)
Village 7 Site & La Media Flow	133	n/a	98.8	n/a	n/a	269.1	n/a
Natural Area South of Creek	30,32	n/a	39.1	n/a	n/a	139.8	n/a
Area South of Creek (Ultimate Conditions - Developed)	30,32	n/a	39.1	n/a	n/a	210.3*	
La Media without detention		83.7	137.9	54.2	131.8	408.9	277.1
Detention Basin inflow	300	n/a	137.9	n/a	n/a	408.9	n/a
Detention Basin outflow		n/a	137.9	n/a	n/a	109.3	n/a
La Media with detention		83.7	137.9	54.2	131.8	84	-47.8

* Flow for Vortec property approximated based ultimate conditions. *Source: Hunsaker & Associates*

B. Storm Water Quality

Both the Rick Engineering Preliminary Water Quality Technical Report (WQTR) and the Hunsaker WQTR summarize the storm water protection requirements for the McMillin and Otay Project, L. P., respectively, portions of the Otay Ranch Village 7 project. The WQTRs describe the permanent storm water best management practices (BMPs) that will be incorporated in order to mitigate the impacts of urban runoff due to the Otay Ranch Village 7 SPA project.

The grading concepts for Village 7 SPA have not been approved for final engineering. The design scenarios for the post-project conditions are as follows:

1. **McMillin Ownership:**

The McMillin Village 7 project shall convey post-project flows from the majority of the Eastern Urban Center (EUC), located upstream of Village 7, east of the State Route 125. The EUC, which is currently undeveloped, is planned for high-density multi family residential, office and commercial land uses and will function as the urban center of the Otay Ranch. The runoff shall be conveyed from the EUC to Wolf Canyon where McMillin Village 7 on-site storm drainage will confluence with the EUC drainage. At this confluence the developed flows from the EUC and a large portion of the McMillin Village 7 will outlet into a forebay. The forebay will be followed by a series of extended detention basins (known as the Wolf Canyon Water Quality and Detention Basin). Further, the project is recreating a receiving water (that will convey a portion of Village 7 treated post-project flows) that will be located adjacent to the series of basins proposed for Wolf Canyon.

Field surveys, conducted in 2003 by Helix Environmental Planning, determined that the upper portion of Wolf Canyon consists of un-vegetated, non-wetland waters. This area has limited functions and values for wildlife and water quality, as it has been in active agricultural usage up to the present day. Therefore, it was determined that the appropriate location for the extended detention basin would be in Wolf Canyon, just upstream of Magdalena Road. In the design scenario for McMillin Village 7, the extended detention basin and the forebay shall be equipped to handle, treat, and detain the post-project flow from the future EUC project and the majority of the residential portion of the McMillin Village 7 project. The project proposes regional benefits with respect to water quality, while maximizing conservation of more significant biological resources offsite.

There are two alternatives proposed for the McMillin Village 7 project. Both alternatives use a combination of structural treatment control BMPs (in addition to the Wolf Canyon Water Quality and Detention Basin) to treat post-project flows, generated from the project, before leaving the site. The preliminary WQTR by Rick Engineering provides details of the two proposed alternatives; Alternative A and B. Alternative A proposes treating post-project flows tributary to the storm drain systems that are located in Magdalena Road and Rock Mountain Road and the storm drain system that serves the northern basin (that drains to Poggi Canyon) with inlet filter inserts. In addition, the project proposes an in-line treatment facility at the downstream portion of the storm drain system that outlets into the receiving water associated with the Wolf Canyon Basin. Alternative B proposes three in-line treatment facilities. One that would be located at the downstream portion of the storm drain system that outlets into the receiving water associated with the Wolf Canyon Basin. Another unit would be installed at the downstream portion (near the intersection of Magdalena Road and Birch Parkway) of the storm drain system that serves the drainage basin that flows northerly to Poggi Canyon. The last unit that would be associated with the storm drain system is located on Magdalena in the central portion of the project, just before the confluence with the Wolf Canyon Basin flows. For the remainder portion of the project (storm drain systems that serve the southern portion of the project) inlet filter inserts shall be installed. For location of the structural treatment control BMPs described above please refer to the exhibits located in the Preliminary WQTR by Rick Engineering.

Post-construction structural BMPs (either inlet filter inserts or an in-line treatment facility based on the chosen design alternative) shall serve the northerly portion of

McMillin Village 7 to treat post-project flows (before discharging through Village 6 and to Poggi Canyon). A regional detention facility further downstream has also been designed by Village 6 to capture and detain the post-project flows associated with this basin.

The drainage basin along the high school site, which is located in the southerly portion of the McMillin Village 7, will consist of a mass graded area plus a portion of Magdalena Road and Rock Mountain Road. A temporary desilting basin shall serve the high school site. In addition proposed storm drain systems shall be installed on Magdalena Road and Rock Mountain Road to convey the flows from the high school site and the runoff from the roads offsite in a westerly direction. Bio Clean Inlet Filter Inserts are proposed to be installed in a portion of the inlets that are located within this portion of McMillin Village 7 for the treatment of the post-construction runoff before discharging off-site.

2. Otay Project, L. P. Ownership

Development of the Otay Ranch Village 7 Neighborhood R-2 project site will include the construction of single-family homes as well as the associated streets, sidewalks, landscaping and utilities. Two flow-based BMPs will be located on the Village 7 Neighborhood R-2 project site.

The *Preliminary Water Quality Technical Report for Otay Ranch Village 7,Neighborhood R-2 and Village 4 Park Site, dated May 21, 2004, by Hunsaker & Associates*, details the design of the detention basin for Village 7 Neighborhood R-2. As shown in the referenced report, the detention facility mitigates the design peak flow increase from Village 7 below pre-development levels. The 85th percentile flow will be treated in one of the proposed Vortechs, or approved equivalent flow-based treatment units. Two offline treatment units will treat flow from the Village 7 Neighborhood R-2 site. In addition, the Hunsaker report addresses pre and post developed peak flows produced from the overall development site as well as the McMillin development upstream and Village 2 downstream.

Two flow-based Vortechs systems, or approved equivalent systems will treat the 85th percentile runoff from Village 7, Neighborhood R-2 as well as runoff from a portion of La Media Road and the adjacent slopes. The proposed Vortechs, or approved equivalent units will be designed as offline, pre-cast treatment units. In addition to a site specific treatment unit, the design will include a diversion structure that will divert the entire 85th percentile runoff flow from the watershed into the treatment unit. Flows in excess of the design flow rate pass over the weir and proceed downstream. Additional information about the Vortechs system can be found in Chapter 7 of the Hunsaker study.

II.5.4.9.6 Financing Drainage Facilities

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 Otay Ranch Village 7 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 water quality maintenance activities associated with drainage facilities. As such, the City will enter into an agreement with the Otay Ranch Village 7 applicant whereby maintenance of such 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.

The owner/developer will assume the ownership and maintenance responsibilities of the storm drain system within McMillin Village 7 until construction is complete. At such time the City of Chula Vista will take over the maintenance responsibilities for the public storm drain facilities. Funding for a special tax district will establish long-term maintenance and monitoring of water quality facilities located within public open space or ROW, formed for that purpose.

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 Otay Ranch Village 7 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.

II.5.4.9.7 Threshold Compliance and Recommendations

Compliance

A. The proposed detention basins located within the Wolf Canyon area will mitigate the increased runoff from the Village 7 development. For the McMillin ownership refer to the Preliminary Drainage Study by P&D Consultants. For the Otay Project, L. P. ownership refer to the Master Drainage Study by Hunsaker & Associates. Also, refer to the preliminary project WQTR for preliminary design calculations related to the planned detention basins. The future grading design for Village 7 shall include preparation of a final drainage report in accordance with the preliminary drainage studies and the City of Chula Vista standards and general requirements.

   Prior to approval of any grading plan by the City Engineer and/or Site Plan by the Design Review Committee, whichever occurs first, the applicant shall demonstrate compliance with the City of Chula Vista's Storm Water and Discharge Control Ordinance and The Development and Redevelopment Projects Storm Water Management Standards Requirement Manual (including the City of Chula Vista SUSMP). Applicant shall obtain the approval of the City Engineer of a Water Quality Technical Report that includes the following elements:

   1. Description of project characteristics, site conditions, flow patterns, pollutants emanating from the project site, and conditions of concern.
   2. Description of site design and source control BMPs considered and to be implemented.

3. Description of applicable treatment control BMPs considered and to be implemented to reduce or treat the identified pollutants. Treatment control BMPs may be selected from those post-construction BMPs analyzed in the Water Quality Report prepared by Rick Engineering or similar type of BMPs as approved by the City Engineer.
4. Justification for selection of the proposed treatment control BMP(s) including 1) targeted pollutants, justification, and alternative analysis, 2) design criteria (including calculations), 3) pollutants removal information (other than vendors specifications), and 4) literature references.
5. Site plan depicting locations of the proposed treatment control BMPs; and
6. Operation and maintenance plan for the proposed treatment control BMPs.

Recommendations

The Otay Ranch Village 7 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.

The Otay Ranch Village 7 shall incorporate urban runoff planning in the Tentative Map. The Otay Ranch Village 7 shall be required to comply with all current regulations related to water quality including best management practices (BMPs) 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.

The Otay Ranch Village 7 applicant/s 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 Community Facilities District (CFD) established over the entire project to raise funds through the creation of a special tax for drainage maintenance purposes.

Future drainage studies shall be required for tentative map applications for those areas west of Magdalena Street to demonstrate the adequacy of the proposed on-site storm drain system(s) and the existing storm drain connections. In addition,

The Applicant/s, as required by the City of Chula Vista, shall prepare future drainage reports for the final engineering phase(s) of the Otay Ranch Village 7 project.

II.5.4.10 AIR QUALITY

II.5.4.10.1 Threshold Standard

The City annually provides the San Diego Air Pollution Control District (APCD) with a 12-18 month development forecast and request an evaluation of its impact on current and future air quality management programs, along with recent air quality data. The growth forecast and APCD response letters shall be provided to the GMOC for inclusion in its annual review.

II.5.4.10.2 Service Analysis

Air Quality Improvement Plan

One of the stated objectives of the City of Chula Vista's Growth Management Element (GME) of the General Plan 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. Although adopted in 1989, the GME has remained current by not only requiring air pollution reduction measures identified in 1989 but also "measures developed in the future."

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.

Per recently adopted guidelines; two options are available to meet the AQIP requirement. The Developer may choose to participate in the Chula Vista GreenStar Building Efficiency Program or evaluate the project using the Chula Vista CO_2 INDEX model including any necessary site plan modifications. The Village 7 SPA project sponsor has chosen to participate in the Chula Vista GreenStar Building Efficiency Program and has prepared a AQIP consistent with that selection. However, other landowners within Village 7 may choose another compliance method. Should that occur, a supplemental AQIP(s) shall be prepared concurrent with the Supplemental SPA Plan or SPA amendment for each ownership.

The AQIP included in the Village 7 SPA is entitled *Air Quality Improvement Plan, Village Seven Sectional Planning Area (SPA) Otay Ranch GDP by Cinti Land Planning dated August 24, 2004*. According to the AQIP the project sponsor has agreed to exceed the California 2001 Title 24, Part 6, Energy Efficiency Standards (CA 2001 Title 24, effective 6/1/01) by 15% in the majority (50% or greater) of residential dwelling units through participation in a building efficiency program such as ComfortWise or CA Energy Star, or develop a custom building efficiency program using construction methods that exceed CA 2001 Title 24 requirements by 15%.

The two project sponsors own the land comprising parcels R-l, R-2, R-5, R-6 and R-7 (see Exhibit 3), totaling 1,204 residential units. Others own all other private development sites in Village 7, hence the project sponsors' commitment includes only those parcels. The project sponsors' commitment is to construct 50% of their respective ownership, 602 units, within those parcels to the Chula Vista GreenStar Building Efficiency Program standard, as described above.

Because energy conservation technology and programs are constantly maturing, the specific program will not be identified until approval of the Village 7 Tentative map. At that time, the AQIP in the SPA shall be updated to identify the specific building efficiency program to be used, or the project sponsor will design a custom building program that exceeds CA 2001 Title 24 requirements by 15%. If a custom building program is submitted, it shall be accompanied by data confirming that it exceeds CA 2001 Title 24 to the satisfaction of the Director of Planning and Building or his/her designee. The lot numbers of the homes participating in the selected building efficiency program will also be identified at the Tentative Map (or final map) submittal/approval stage.

In addition to the GreenStar Building Commitment above, the Village 7 SPA also includes the following land use and design features that promote efficiency and energy conservation:

- Transit Oriented Development – Although this village is not located along a primary transit line, a transit stop will be located in the village core providing access to public mass transit for commuting and other trips. The compact design and integrated street/path circulation system places daily need within easy walking or biking distance. The greenbelt connection, which bisects the village, is an integral design element of the village core, connecting open space, trails, recreational amenities, civic uses and schools.
- Housing Efficiency - In addition to the transit benefits associated with increased density near transit centers, there are building related energy benefits. Smaller, and more compact single-family, attached single-family and multi-family homes use less energy for space heating and cooling than typical single-family detached homes.
- Street Widths, Pavement and Street Trees - Reducing street widths can reduce heat build-up and consequently energy demand for air conditioning. In addition to reduced pavement width, the inclusion of street trees that shade the pavement will reduce temperatures. Village 7 streets have reduced widths consistent with the standards in the Otay Ranch GDP; residential streets have a 32 foot paved section compared to a 36-40 foot section typical of suburban development patterns.

11.5.4.10.3 Threshold Compliance and Recommendations

The City continues to provide a development forecast to the APCD in conformance with the threshold standard. A separate Air Quality Improvement Plan has been provided as part of the SPA Plan process as noted in Section II.5.4.10.2.

II.5.4.11. CIVIC CENTER:

II.5.4.11.1 CITY THRESHOLD STANDARDS:

There is no adopted threshold standards for these facilities. The facility information is being provided in this report to aid in establishing operational benchmarks which will determine construction phasing of the Civic Center. These facilities are funded through the collection of the DIF fees in effect at the time building permits are issued.

II.5.4.11.2 SERVICE ANALYSIS:

Although the existing Civic Center successfully accommodated city administration offices prior to the mid-1980's population growth, increase in City staff to meet new demands of growth has caused increasing congestion problems. Most staff in the Public Services Building experience space shortages, lack of privacy and storage, and frequent noise distractions. This was reported in a survey, which is included in the Civic Center Master Plan dated May 8, 1989. Site Alternative Three "The Suburban Scheme" was selected from the master plan at a City Council conference on June 22, 1989.

II.5.4.11.3 EXISTING CONDITIONS:

Table L.1
Civic Facilities Inventory

Existing Civic Center facilities	Square Feet
Civic Center	111,940 s.f.
Previous County Health Center	3,120 s.f.
Future Public Works Inspections Division	1,200 s.f.
Total	**116,260 s.f.**

Parking Lots: 333 spaces

Table L.2
Future Facilities Cost

	FUTURE FACILITIES COST	SIZE	ESTIMATED COST
1.	City Hall	25,765 s.f.	$2,203,300
2.	Public Services Facility	40,615 s.f.	$3,023,500
3.	New City Hall Annex	28,925 s.f.	$3,023,600
4.	Legislative Offices	6,000 s.f.	$1,330,000
5.	Subterranean Parking	126 spaces	$1,008,000
6.	Parking Structure	359 spaces	$2,872,000
7.	Demolition	5,920 s.f.	$83,600
8.	Surface Parking	45,425 s.f.	$227,100
9.	Misc. Site Improvements	15,000 s.f.	$180,000
10.	Landscaping	55,000 s.f.	$698,500
11.	Land Acquisition (459 F St.)	-	
12.	Master Plan	-	$65,250
TOTAL			**$15,459,300**

Note: Some of the size figures represents a combination of remodeled existing square footage and newly constructed square footage. The completed civic facilities will total 149,120 square feet with 625 parking spaces.

II.5.4.11.4 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 facilities, according to the master plan, are currently inadequate because of the lack of space. This inadequacy will worsen as employee numbers and their workloads increase in response to demands for services, which are generated by new development.

The City is moving ahead to implement Phase #1 of the Civic Center Master Plan by acquiring additional land to the west of the existing Civic Center for the proposed parking garage.

II.5.4.11.5 FINANCING CIVIC CENTER FACILITIES:

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2886 and 2887. The current Civic Center fee for single-family residential development is $1,089/unit, multi-family residential is $979/unit, commercial (including office) development is $4,245/acre and industrial development is $711/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA project.

The Otay Ranch Village 7 project is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Village 7 SPA Plan obligation at buildout is estimated at $1,260,532.

Table L.3
Civic Center Fee For Otay Ranch Village 7 SPA

Phase	Single Family Units	Multi-Family Units	Com'l Acres	SF Fee $1,089/Unit	MF Fee $979/Unit	Com'l Fee $4,245/ Acre	Total
White	0	0	0	$0	$0	$0	$0
Blue	346	448	0	$376,794	$437,248	$0	$814,042
Red	375	0	0	$408,375	$0	$0	$408,375
Green	35	0	0	$38,115	$0	$0	$38,115
Subtotal	756	448	0	$823,284	$0	$0	$1,260,532
Total	**1,204**		**0**	**$823,284**	**$437,248**	**$0**	**$1,260,532**

II.5.4.11.6 THRESHOLD COMPLIANCE AND RECOMMENDATIONS:

Civic Center facilities will be funded through the collection of the public facilities fees at the rate in effect at the time building permits are issued.

II.5.4.12 CORPORATION YARD

II.5.4.12.1 THRESHOLD STANDARDS:

There is no adopted threshold standard for this facility. The facility information is being provided in this report to aid the City in establishing operational benchmarks which will determine construction phasing of the corporation yard.

II.5.4.12.2 SERVICE ANALYSIS:

New development, with its resultant increase in required maintenance services, creates a need for a larger corporation yard. A new 25 acre yard located at 1800 Maxwell Road was completed this year by the city.

II.5.4.12.3 EXISTING CONDITIONS:

The new 25 acre Corporate Yard Facility was previously an SDG&E equipment and repair facility. The city has renovated and added new improvements for the maintenance and repair of city owned equipment. This facility consists of a renovated building that serves as the administration building for the Corporate Yard. Existing shop buildings have been renovated and new shops have been added as well as a new maintenance building. The Corporate Yard includes parking for employees, city vehicles and equipment. In addition, a Bus Wash/Fuel Island/CNG and associated equipment.

II.5.4.12.4 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.

II.5.4.12.5. FINANCING CORPORATE YARD FACILITIES:

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2886 and 2887. The current Corporate Yard fee for single-family residential development is $706/unit, multi-family residential is $472/unit, commercial (including office) development is $3,266/acre and industrial development is $1,361/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA project.

The Otay Ranch Village 7 project is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Village 7 SPA Plan obligation at buildout is estimated at $745,192.

Table M.1 Corporate Yard Fee For Otay Ranch Village 7 SPA							
Phase	**Single Family Units**	**Multi-Family Units**	**Com'l Acres**	**SF Fee $706/Unit**	**MF Fee $472/Unit**	**Com'l Fee $3,266/ Acre**	**Total**
White	0	0	0	$0	$0	$0	$0
Blue	346	448	0	$244,276	$211,456	$0	$455,732
Red	375	0	0	$264,750	$0	$0	$264,750
Green	35	0	0	$24,710	$0	$0	$24,710
Subtotal	756	448	0	$533,736	$211,456	$0	$745,192
Total	**1,204**			**$533,736**	**$211,456**	**$0**	**$745,192**

5.3.12.5. THRESHOLD COMPLIANCE:

Corporate Yard facilities will be funded through the collection of the public facilities fees at the rate in effect at the time building permits are issued.

5.3.13. OTHER PUBLIC FACILITIES

5.3.13.1. THRESHOLD STANDARD:

There is no adopted threshold standard for these facilities which are part of the Public; Facilities Development Impact Fee Program and include GIS, Mainframe Computer, Telephone System Upgrade, Records Management and Administration. The information regarding these capital items is being provided in this section of the PFFP to aid the City and the Developer in calculating the PFDIF fees to be paid by the Otay Ranch Village 7 SPA project.

5.3.13.2. SERVICE ANALYSIS:

The public facilities identified above are described in the report entitled *Development Impact Fee for Public Facilities* dated April 20, 1993, known as document number C093-075.

5.3.14.2. EXISTING CONDITIONS:

The City continues to collect funds from building permit issuance in the Eastern Territories for deposit to the accounts associated with other public facilities. These facilities include administration, telecommunications, computer systems and GIS.

5.3.14.3. FINANCING OTHER PUBLIC FACILITIES:

The Public Facilities Development Impact Fee (PFDIF) was updated by the Chula Vista City Council on November 19, 2002 by adoption of Ordinance 2886 and 2887. The current Other Public Facility fee for single-family residential development is $167/unit, multi-family residential is $150/unit, commercial (including office) development is $652/acre and industrial development is $109/acre. This amount is subject to change as it is amended from time to time. Both residential and non-residential development impact fees apply to the Otay Ranch Village 7 SPA.

The Otay Ranch Village 7 project is within the boundaries of the PFDIF Program and, therefore, 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 Otay Ranch Village 7 SPA Plan obligation at buildout is $193,452.

Table N.1
Other Public Facilities for Otay Ranch Village 7 SPA

Phase	Single Family Units	Multi-Family Units	Com'l Acres	SF Fee $167/Unit	MF Fee $150/Unit	Com'l Fee $652/ Acre	Total
White	0	0	0	$0	$0	$0	$0
Blue	346	448	0	$57,782	$67,200	$0	$124,982
Red	375	0	0	$62,625	$0	$0	$62,625
Green	35	0	0	$5,845	$0	$0	$5,845
Subtotal	756	448	0	$126,252	$67,200	$0	$193,452
Total	**1,204**			**$126,252**	**$67,200**	**$0**	**$193,452**

5.3.14.4 THRESHOLD COMPLIANCE AND RECOMMENDATIONS:

Other Public Facilities will be funded through the Collection of public facility fees at the rate in effect at the time building permits are issued.

II.5.4.14 FISCAL ANALYSIS

II.5.4.14.1 Threshold Standard

1. 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.

2. The GMOC shall be provided with an annual "economic monitoring report" which provides an analysis of economic development activity and indicators over the next previous 12-month period, as well as projected growth over the next 12-18 month period, and 3-5 year period.

II.5.4.14.2 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.

II.5.4.14.3 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.

II.5.4.14.4 Fiscal Analysis of Project

II.5.4.14.4.1 Introduction

This section of the PFFP is based upon the Fiscal Impact Analysis as prepared by CIC Research, Inc. dated June 9, 2004. The CIC analysis identifies the estimated fiscal impact that the Otay Ranch Village 7 SPA will have on the operation and maintenance budgets of the City of Chula Vista (general fund). Information pertaining to the scope of development was derived from the SPA Plan and the Environmental Impact Report.

Two basic methodologies were utilized in estimating public agency revenues and expenditures; the case study and per unit/acre multiplier methods. The case study method was used to estimate secured property tax. The case study method is based on specific characteristics of the project from which revenues can be estimated. Appropriate city officials were contacted to identify actual tax rates, fees and costs. The per unit/acre multiplier method, which represents a more general approach was utilized to estimate unsecured property tax, sales tax, TOT, property transfer tax, utility tax, license fees, fines, other revenues and fees and all expenditures. CIC also utilized input from the fiscal impact prepared for Otay Ranch Village 6, Eastlake Trails, Eastlake III, and San Miguel Ranch. The City of Chula Vista's Fiscal Model was utilized to estimate per unit/acre multipliers.

Future revenues and expenditures are presented in current (2004) dollars. Also, revenues and expenditures are depicted annually, reflecting a conservatively projected development absorption schedule based on information provided by the city and the developer as well as

market analysis. This approach identifies annual project fiscal surpluses and deficits and represents a more realistic approach when compared to assuming instant build-out.

II.5.4.14.4.2 Project Description

The Village 7 SPA is proposed to be developed in the City of Chula Vista and includes 756 single-family units and 448 multi-family residential units, and 7.6 acres of publicly maintained park at build-out. This fiscal analysis is based on that project scenario. Any alternative project scenarios, additions and/or changes would require further analysis and revisions to this PFFP fiscal impact analysis. Presented in Table O.1 is a description of the projected absorption schedule as used in this fiscal analysis. This schedule includes a 7 year (2004 to 2010) development schedule. For the purpose of this analysis, absorption represents new units being sold and occupied, and commercial and industrial land developed sold and occupied.

Housing market values were estimated by CIC and ranged from approximately $300,000 (multi-family) to $400,000 (single family). The values used in the table represent the estimated average unit price for each type of development. Residential values were estimated using DataQuick and previous studies.

II.5.4.14.4.3 Project Demographics and Land Uses

In developing per unit/acre multipliers, CIC utilized demographic and land use information related to the City of Chula Vista as a whole and, more specifically, the subject Village 7 SPA. Included in Table O.2 are population, housing, land-use and infrastructure characteristics. The developer (McMillin & Otay Project, L.P.) provided the number of housing units and acres by land use for Village 7 SPA. The number of street miles were estimated using the average of other new developments. Lane miles were estimated using the city average. The number of streetlights also represents an estimate and was derived by using the City standard of 350 feet between streetlights.

Table O.1
Otay Ranch Village 7 SPA
Absorption Schedule and Market Values by Land Use

Land Use	Net Unit Value (000's)	Cumulative Developed and Occupied Net Acres							
		2004	2005	2006	2007	2008	2009	2010	Total
SF	$400	100	200	300	400	500	600	756	756
MF	$300	100	200	300	400	448	448	448	448
Total		200	400	600	800	948	1,048	1,204	1,204

Source: CIC Research, Inc.

Table O.2 Village 7 SPA Fiscal Impact General Assumptions		
Chula Vista		Sources
Population	189,664	CA Dept. of Finance
Occupied Housing Units	62,500	CA Dept. of Finance
Persons Per Household	3.03	CA Dept. of Finance
Street Miles	365	CV Public Works
Lane Miles	1351	CV Public Works
Traffic Signals	142	CV Engineering
Street Lights	6,307	CV Engineering
Estimated Avg. HH Income	$55,992	Claritas, Inc.
Median Housing Price	$197,000	DataQuick Info.Serv.
Land Uses (Developed Acres)		
Commercial	I,404.41	CV Planning
Industrial	728.29	CV Planning
Residential	8,226.81	CV Planning
Park	1708.42	CV Planning
Village 7 SPA		
Estimated Population	3,534	CIC Research, Inc
Housing Units	1,174	McMillin Co.
Persons Per Household	3.01	CV Planning
Public Park Acres	7.6	McMillin Co.
Street Miles	7	CIC Research, Inc.
Lane Miles	22	CIC Research, Inc
Street lights	106	CIC Research, Inc
Estimated Avg. HH Income	$80,000	CIC Research, Inc
Median Housing Price	$400,000	CIC Research, Inc

Source: CIC Research, Inc.

II.5.4.14.4.4 Revenues

Operating revenues for the City of Chula Vista resulting from the development of the proposed Village 7 SPA are estimated in this section. The major revenue sources which are expected to be generated from the subject developments and detailed in this chapter include property tax (secured and unsecured), property transfer tax, sales tax, franchise fees, TOT, utility tax, license revenue, miscellaneous fines, homeowner's property tax relief, gas tax and charges for various current services. The City of Chula Vista's Budget (FY 2003) for these revenue items is detailed in Table O.3 along with allocation rates. The following section details each of the revenue sources and the methodology employed to estimate revenues from the subject developments. For each identified revenue source, a detailed table reflecting the revenue flow over the project build-out (2004 to 2010) is presented in the Appendix of this report. All dollar figures are presented in 2004 dollars (no inflation rates were used).

Table O.3
Village 7 SPA Fiscal Impact
Revenue Generation Assumptions

Revenues	City of Chula Vista FY2003 Revenues	Allocation Assumption
Property Taxes		
Secured	$ 13,504,354	Based on 10.6% of 1% of TAV
Unsecured	$655,000	$312/acre industrial, $301/acre commercial
Other Taxes		
Property Transfer Tax	$963,000	$0.18 annual ave. per $1,000 assessed value
Sales & Use Tax	$20,353,998	$234/residential unit, $3,354/acre industrial, $3,570/acre commercial
Franchise Fees	$6,935,040	$41/residential unit,$2,523/acre industrial, $1,802/acre commercial
TOT	$2,173,500	$3/residential unit, $134/acre industrial, $70/acre commercial
Utility Tax	$4,170,600	$25 per residential unit, $1,518/acre industrial, $1,084 /acre commercial
Licenses		
Business License	$1,057,417	$319/acre industrial, $587/acre commercial
Other Licenses	$96,614	$1.50 per residential unit
Fines		
Library Fines	$170,000	$2.72 per residential unit
Parking Citations	$312,995	$3.76 per residential unit, $26/acre industrial, $42/acre commercial
Revenues from other Agencies		
Gas Tax	$2,559,533	$36 per residential unit, $105/acre industrial, $173/acre commercial

Secured Property Tax

Secured property tax revenues generated from the proposed developments were calculated on the basis of a one-percent tax rate on the current market value of the residential, industrial, and commercial development. The subject properties are in tax rate areas 0162. According to the County of San Diego, the City of Chula Vista would receive 10.6 percent of the one-percent of the property taxes collected in those tax rate areas. It should be noted that the citywide average share of property tax is roughly 14.7 percent.

Market values (assessed values) for the residential units were estimated by CIC Research using market data from DataQuick. Market values for commercial and industrial uses were estimated using COMPS, Commercial Property Information Services, Inc., as well as DataQuick and other published materials. These identified market values also represent the assessed values. Although assessed values increase two percent per year and readjust after the property resells, this analysis assumes no inflation and all values remain in 2004 dollars. Included in Table A-2 in the appendix is the cumulative assessed value over the build-out of the developments. Total assessed values for the Village 7 SPA range from $100 million during the first year (2004) to $559 million at build-out (2010).

The City of Chula Vista's share of the collected annual property tax is $592,800 for the Village 7 SPA (Table A-3) at build-out.

Unsecured Property Tax

Unsecured property, which includes personal property such as equipment, inventory, furniture, etc. is taxed for primarily commercial and industrial businesses. As there is no commercial or industrial property included in this project as currently specified, no unsecured property taxes are associated with it.

Property Transfer Tax

Sales of real property in San Diego County are taxed at a rate of $1.10 per $1,000 of the sales price. Chula Vista would receive 50 percent of the tax. An analysis conducted by the San Diego Association of Governments (SANDAG) indicates that the average turnover rate for residential property is once every seven years and once every 14 years for nonresidential property. The following formulas, which take both the transfer tax formula and the average turnover rate into account, were utilized to yield average annual per unit property transfer tax.

Single Family Residential	$\frac{\$.55}{\$1,000}$	X	1/7	=	.00007857
Commercial/Industrial	$\frac{\$.55}{\$1,000}$	X	1/14	=	.00003929

Using the above formulas, an estimated annual average property tax can be calculated. The Village 7 SPA would generate $33,400 (refer to Table A-5 in the Appendices) in average, annual property transfer tax at build-out.

Sales Tax

This fiscal impact methodology equates the collection of sales tax to both residential units and commercial and industrial acreage primarily using a demand allocation method. After subtracting the portion of the City's sale tax that represents Mexican and other non-resident shoppers (this is estimated to be 20% based on City of Chula Vista data). The remainder is allocated to local residents and businesses based on an analysis conducted by the City of San Diego's Finance Department and given the study site location and land-use mix, CIC utilized the following tax allocations, 75% for residential, 10% for retail/office commercial, and the remainder (15%) allocated to industrial land uses. The City's share of sales tax generated by the residential portion of the study property is based on $234 per household per year. This is derived by using 75 percent of the total sales tax collection in the City of Chula Vista, divided by the number of housing units and adjusted roughly 10 percent to

reflect the assumed higher household income in the new development versus the overall City average based on the housing cost differential. Total annual sales tax generated by the Village 7 Project is estimated at $281,700 at build-out (refer to Table A-6).

Franchise Fees

The City of Chula Vista receives a franchise tax fee from sales of natural gas, electricity, cable television and trash collection. Using the sale of gas and electricity as a guideline and based on a study prepared by San Diego Gas and Electric (SDG&E), 37 percent of the franchise fees are attributed to residential uses, 36.5 percent to retail/office uses and the remaining 26.5 percent is attributed to industrial uses. Using these guidelines, the city budget, area demographics and land use information results in an estimated $41 in annual franchise fees per housing unit. Utilizing this ratio results in a total annual franchise fee of $49,400 for the Village 7 SPA (see Table A-7 in the Appendices) at build-out.

Transient Occupancy Tax

Transient occupancy tax (TOT) is a tax added to the price charged for the use of a hotel or motel room. The majority of the tax is associated with new hotel developments. Since there is no planned hotel/motel development in this project, TOT would be generated by the residents by their associated use of local hotels/motels (primarily used for the lodging of visiting family and friends). The San Diego Convention and Visitors Bureau estimates that of all visitors who stay in hotels and motels, eight percent are visiting friends or relatives. Utilizing the City's FY2003 budget for TOT of $2,064,000 and assuming eight percent is generated by residential land uses results in multiplier ratios of roughly $3 per housing. Using this ratio and the estimate of TOT generated by the tourist commercial, the City of Chula Vista will receive a total annual TOT tax of $3,600 associated with the Village 7 SPA (refer to Table A-8 in the Appendices).

Utility Users' Tax

The City of Chula Vista's FY2002/03 budget for utility taxes is $3,170,600. These taxes are paid by the residents on gas, electric and telephone services. CIC utilized the same methodology for utility taxes and franchise fees. Using the land use allocation of 79 percent residential uses, 14 percent to retail/office uses and 7 percent to industrial uses, results in an estimated $25 in annual utility tax per housing. This ratio result in a total annual utility tax of $30,100 for the Village 7 SPA (refer to Table A-9 in the Appendices) at build-out.

Business License Fees

Although, there are business license fees generated from home occupations, the amount is negligible. Therefore, business license fees are allocated solely to commercial and industrial land uses in this fiscal impact study. As there is no commercial or industrial property included in this project as currently specified, no business license fees are associated with it.

Miscellaneous Revenues

CIC grouped numerous revenues into the category of miscellaneous. These revenues include: animal licenses, bicycle licenses, State homeowners property tax relief, gas tax, library fines, parking citations, swimming pool fees, recreation programs and park reservation fees. With the exception of gas tax and parking citations, all the revenues are assumed to be allocated entirely to residential uses. For these revenues, multipliers were developed by dividing the total revenues by the total number of citywide occupied housing units, commercial and industrial acreage. Total miscellaneous revenues attributed to the

Village 7 SPA are $65,700 per year at build-out (refer to Table A-11 of the Appendices). The allocation of gas tax and parking citations was calculated as follows:

- **Gasoline Tax**
  Gasoline tax revenue accrues on the basis of a complicated formula utilizing county to state and incorporated to unincorporated portion of population. According to the City of San Diego's "Fiscal Impact of New Development" and the Department of Motor Vehicle's auto registration records, an estimated 50 percent is attributed to residential uses and the remaining 50 percent is allocated based on vehicle registration (75% residential, 19% commercial and 6% industrial).

- **Parking Citations**
  Parking violation revenues were allocated by vehicle registration classification as estimated by the Department of Motor Vehicles (75% residential, 19% commercial and 6% industrial).

II.5.4.14.4.5 Operating Expenditures

Operating expenditures for the City of Chula Vista resulting from development of the Village 7 SPA are outlined in this section. CIC utilized the cost factors developed by Economic Research Associates (ERA) and the City of Chula Vista Finance Department. Table O.4 presents those cost factors. Detailed tables reflecting the annual expenditure cash flows are presented in the appendix to this report.

Table O.4
VILLAGE 7 SPA FISCAL IMPACT
COST ALLOCATION ASSUMPTIONS

	Population (Per person)	Comm'l (Per Acre)	Industrial (Per Acre)	Residential (Per DU)	Parks and Rec. (Per Acre)	Public Use (Per Acre)	Open Space (Per Acre)
Legislative & Administrative							
City Council	0.16						
Boards & Commissions	0.51	29.86	29.86	3.96			
City Clerk	0.47						
City Attorney							
Administration							
Total	**1.14**	**29.86**	**29.86**	**3.96**	**0**	**0**	**0**
Mangement and information services	0.61						
Human Resource	0.09						
Finance	0.11						
General Services	2.25						
Total	**3.06**	**0**	**0**	**0**	**0**	**0**	**0**
Development & Maintenance Services							
Community Development	0.82	545.87	284.19	12.95	18.06	27.09	2.26
Planning & Building services	1.12		12.53	21.55	42.67	64.01	5.33
Engineering			39.06	13.21			
Operations				7.38			
Total	**1.94**	**545.87**	**335.78**	**55.09**	**60.73**	**91.1**	**7.59**
Public Safety							
Police	5.39	7114.26	516.16	1.73	822.48	822.48	822.48
Fire		1989.45	134.16		119.02	119.02	119.02
Total	**5.39**	**9103.71**	**650.32**	**1.73**	**941.5**	**941.5**	**941.5**
Cultural & Leisure							
Recreation	19.78			3.82			
Library	60.43						
Nature Center							
Total	**80.21**	**0**	**0**	**3.82**	**0**	**0**	**0**
Non-**Departmental** Operations	1.33						
Total	**1.33**	**0**	**0**	**0**	**0**	**0**	**0**

Table O.4 Continued VILLAGE 7 SPA FISCAL IMPACT COST ALLOCATION ASSUMPTIONS	
FAZ based	
	Southeast Per DU
Development and Maintenance Services	
Public Works Operations	147.83
Public Safety	
Police	263.33
Fire	97.58

Source: City of Chula Vista, Finance Department
Economic Research Associates
February 23, 2004

Legislative and Administration

The cost for the City Council, various boards and commissions, the City Clerks office, the City Attorney's office and general city administration make up the legislative and administration cost center. Based on the City and ERA's analysis, the cost for the Village 7 project is allocated at a rate of $3.96 per residential dwelling unit and $1.14 per person. Table A-12 in the appendix shows annual legislative and administration expenditures for the Village 7 Project ($8,900) at build-out.

Management and Information Services

Management and Information Services include human resources, finance and general services. The City's model allocates the costs to residents at $3.06 per person. These multipliers translate into management and information services costs of $11,100 for the finished Village 7 Project (refer to Table A-13).

Development and Maintenance Service

Development and Maintenance Services include community development, planning and building services, engineering, and public works operations. The City's model allocates the costs both citywide and for each zone of the city. For Residential units $55.09 in citywide costs and $147.83 in zone costs are allocated for each dwelling unit. An additional $1.94 is allocated per capita. The remaining land uses associated with Village 7 have costs associated with them in the following manner: parks - 60.73 per acre, public use - $91.10 per acre These multipliers translate into Development and Maintenance Services costs of $252,100 for the finished Village 7 Project (refer to Table A-14).

Police

Police services costs are allocated to all land uses. Residential units in the Southeast zone are allocated $263.33 per unit and $5.39 per person. For Village 7 parks and public use was allocated 822.48 per acre for police costs. Total police costs at buildout is estimated to be $345,200 (refer to Table A-15)

Fire Protection

Fire costs are $99.31 for each residential unit. Parks and public use are associated with $822.48 per acre. These ratios result in annual fire protection costs of $120,800 for the Village 7 Project (refer to Table A-16).

Cultural and Leisure

Based on the City of Chula Vista model, cultural and leisure costs are assessed at a rate of $3.82 per dwelling unit and $80.21 per person. This sector is made up of the costs associated with the recreation department, the library, and the nature center. Total costs for the Village 7 project at completion would be $295,300

Other Non-Departmental

Other non-departmental costs are allocated at a rate of $1.33 per person. For Villae 7 this cost amounts to $4,800 at buildout.

II.5.4.14.6 Net Fiscal Impact

Utilizing the previously mentioned methodologies estimated net fiscal impacts are presented in Table O.6. As previously mentioned, all values are in 2004 dollars. No annual adjustments to revenues or costs were utilized. The estimated annual flows of costs and revenues are primarily related to the estimated project absorption and street maintenance schedules.

Table O.5 presents the results of the fiscal impact associated with the Village 7 Project. Fiscal revenues range from $151,200 in the first year of development (2004) to $927,800 at build-out (2010). Fiscal expenditures range from $256,200 in year one to $1,038,200 at build-out. The net fiscal impact from developing the Village 7 Project is negative in year one ($105,000 deficit) and remains so throughout. At build-out, the net fiscal impact is estimated to result in a deficit of $110,400.

Table O.5
NET FISCAL IMPACT OF THE VILLAGE 7 PROJECT
ON THE CITY OF CHULA VISTA

Revenue Sources	Revenues (In Thousands)						
	2004	2005	2006	2007	2008	2009	2010
Secured Property Tax	$74.2	$148.4	$222.6	$296.8	$354.5	$396.9	$463.0
Unsecured Property Tax	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Property Transfer Tax	$5.5	$11.0	$16.5	$22.0	$26.3	$29.4	$34.3
Sales & Use Tax	$46.8	$93.6	$140.4	$187.2	$221.8	$245.2	$281.7
Franchise Tax	$8.2	$16.4	$24.6	$32.8	$38.9	$43.0	$49.4
TOT Tax	$0.6	$1.2	$1.8	$2.4	$2.8	$3.1	$3.6
Utility Tax	$5.0	$10.0	$15.0	$20.0	$23.7	$26.2	$30.1
Business License	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Miscellaneous Revenues	$10.9	$21.8	$32.7	$43.6	$51.7	$57.2	$65.7
TOTAL REVENUES	**$151.2**	**$302.4**	**$453.6**	**$604.8**	**$719.7**	**$801.0**	**$927.8**
Expenditure Sources	Expenditures (In Thousands)						
	2004	2005	2006	2007	2008	2009	2010
Legislative & Administrative	$2.2	$3.7	$5.2	$6.3	$7.1	$7.8	$8.9
Management and Information services	$2.8	$4.6	$6.4	$7.8	$8.7	$9.7	$11.1
Development and Maintenance Services	$62.7	$104.4	$146.6	$177.7	$198.5	$219.6	$252.1
Police	$83.9	$140.7	$202.9	$244.9	$272.9	$301.6	$345.2
Fire	$29.8	$49.8	$70.5	$85.3	$95.3	$105.3	$120.8
Cultural and Leisure	$73.6	$122.6	$171.6	$207.9	$232.4	$257.0	$295.3
Non-Departmental	$1.2	$2.0	$2.8	$3.4	$3.8	$4.2	$4.8
TOTAL EXPENDITURES	**$256.2**	**$427.8**	**$606.0**	**$733.3**	**$818.7**	**$905.2**	**$1,038.2**
	2004	2005	2006	2007	2008	2009	2010
TOTAL REVENUES	$151.2	$302.4	$453.6	$604.8	$719.7	$801.0	$927.8
TOTAL EXPENDITURES	$256.2	$427.8	$606.0	$733.3	$818.7	$905.2	$1,038.2
NET FISCAL IMPACT	**($105.0)**	**($125.4)**	**($152.4)**	**($128.5)**	**($99.0)**	**($104.2)**	**($110.4)**

Source: CIC Research, Inc.

II.5.4.15 PUBLIC FACILITY FINANCE

II.5.4.15.1 Overview

The City will ensure the appropriate public facilities financing mechanisms are utilized to fund the acquisition, construction and maintenance of public facilities required to support the planned development of the Otay Ranch Village 7 SPA in compliance with the City's Growth Management Program.

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

1. Subdivision Exaction:	Developer constructed and financed as a condition of project approval.
2. Development Impact Fee:	Funded through the collection of an impact fee. Constructed by the public agency or developer constructed with a reimbursement or credit against specific fees.
3. Debt Financing:	Funded using one of several debt finance mechanisms. Constructed by the public agency or developer.

It is anticipated that all three methods will be utilized for the Otay Ranch Village 7 project to construct and finance public facilities.

II.5.4.15.2 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.

II.5.4.15.3 Development Impact Fee Programs

Development Impact Fees are imposed by various governmental agencies, consist with State law, to contribute to the financing of capital facilities improvements within the City of Chula Vista. The distinguishing factor between a fee and a subdivision exaction is that exactions are requested of a specific developer for a specific project whereas fees are levied on all development projects throughout the City or benefit area pursuant to an established formula and in compliance with State law.

Otay Ranch Village 7 , through policy decisions of the City of Chula Vista and other governing agencies, is subject to fees established to help defray the cost of facilities that benefit Otay Ranch Village 7 and areas beyond this specific project. These fees may include but not be limited to:

1. Eastern Chula Vista TDIF — established to provide financing for circulation element road projects of regional significance in the area east of I-805.
2. Interim SR 125 Transportation Fee - Effective January 1, 1995, to fund interim improvements within the SR 125 right-of way consistent with the pre SR 125 strategy as identified in the Interim State Route 125 Facility Feasibility Study dated May 1993.
3. Traffic Signal Fee — to pay for traffic signals associated with circulation element streets.
4. Public Facilities Development Impact Fee — Public Facilities DIF established to collect funds for Civic Center Facilities, Police Facilities, Recreation, Corporation Yard, Libraries, Fire Suppression System, Geographical Information System (GIS), Mainframe Computer, Telephone System Upgrade and a Records Management System.
5. Park Acquisition and Development Fee — PAD Fee established to pay for the acquisition and development of park facilities.
6. Poggi Canyon Sewer Basin Development Impact Fee — to pay for constructing sewer improvements within the Poggi Canyon basin.
7. Salt Creek & Wolf Canyon Basin Impact Fees — to pay for constructing sewer improvements within the Salt Creek basin.
8. Otay Water District Fees — It should be noted that the Water District may require the formation of or annexation to an existing improvement district or creation of some other finance mechanism which may result in specific fees being waived.

II.5.4.15.4 Debt Finance Programs

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

Assessment Districts

Special assessment districts may be proposed for the purpose of acquiring, constructing, maintaining certain public improvements under the Municipal Improvement Act of 1913, the Improvement Bond Act of 1915, the Benefit Assessment Act of 1982, and the Lighting and Landscape Act of 1972. The general administration of the special assessment district is the responsibility of the public agency.

Special assessment financing may be appropriate when the value or benefit of the public facility can be assigned to a specific property. 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 and maintenance.

As a matter of policy, the City limits the type of improvements that can be financed by assessment district bonding in residential projects. Such improvements are generally limited to collector streets and larger serving entire neighborhood areas or larger. This policy applies to backbone infrastructure including streets, water, sewer, storm drain, and dry utility systems.

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:

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

II.5.4.15.5 Other Methods Used to Finance Facilities

General Fund

The City of Chula Vista's general fund serves to pay 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, hut also Chula Vista residents throughout the City. In most cases, other financing mechanisms are available to initially construct or provide the facility or service, then general fund monies would only be expected to fund the maintenance costs once the facility is accepted by the City.

State and Federal Funding

Although 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.

Dedications

Dedication of sites by developers for public capital facilities is a common financing tool used by many cities. In the case of Otay Ranch Village 7 , the following public sites are proposed to be dedicated:

1. Roads (if public)
2. Open space and public trail systems

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 Otay Ranch Village 7.

Developer Reimbursement Agreements

Certain facilities that are off-site of Otay Ranch Village 7 and/or provide regional benefits may be constructed in conjunction with the development of Otay Ranch Village 7 . 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.

Special Agreements/Development Agreement

This category includes special development programs for financing construction of Telegraph Canyon Road and State Route 125. It also includes any other 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.

II.5.4.15..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.

1. Prior to receiving final approval, developers shall demonstrate and guarantee that compliance is maintained with the City's adopted threshold standards.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

7. 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.

II.5.4.15.7 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) that 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.

Debt capacity is found by totaling the assessed value of residential and commercial/industrial property and applying to this total two percent rate cap established by City policy as can be seen in Table P.1. Subtracting from this total assessed value the value of taxes resulting from application of the effective property tax rate as determined by the County Tax Collector (1.03486%), produces the revenue available from indebtedness that could be placed on the property.

Table P.2. identifies $5,000,000 as the estimated cost of facilities that may qualify for debt financing. This amount is about the same as the first alternative interest cost and bond term example but greater than any of the other alternative interest cost and bond term examples identified on the following page. Using the alternative of 5.0% net interest cost (NIC) and 30 year bond term applied to a conservative $2 million in available annual debt service allows for the financing of approximately $30,745,000 in eligible improvements. This results in an excess bonding capacity of approximately $25,745,000 some of which will be utilized by school financing. Therefore, there appears to be sufficient revenue capacity available to finance the improvements listed, although additional analysis will be required at the time of the first utilization of debt financing in the SPA.

The Public Works Department generally requires the preparation of an assessment district feasibility plan for the build-out of a master planned community prior to initiation of the first assessment district in order to determine the debt capacity limits and benefit zones related to using public financing to fund infrastructure improvements.

Table P.1
Estimated Revenue Available for Debt Service on Land Secured Financings

DU's or Acres	Assessed Value/Unit or Acre	FAR	Total AV
743 Single Family Detached	$400,000	N/A	$302,400,000
448 Multi-Use Residential Units	$300,000	N/A	134,400,000
		Total Assessed Value	$436,800,000
		2.0% Tax Rate Cap by City Policy	$8,736,000
		1.03486% Tax Rate Utilized	$4,520,000
Annual revenue available to pay debt service @ 2.00% - 1.35%			$4,216,000

Using $2 million as a conservative amount available for annual debt service and varying the net interest cost (NIC) and term of bond, the following public facility costs could be funded through a financing vehicle such as Mello-Roos and special assessment districts bonds.

- A 5.0% (NIC) and 30 year term will fund approximately $31 million.
- A 5.5% (NIC) and 30 year term will fund approximately $29 million.
- A 6.5% (NIC) and 25 year term will fund approximately $24 million.
- A 6.5% (NIC) and 20 year term will fund approximately $22 million.
- A 7.5% (NIC) and 25 year term will fund approximately $22 million.
- A 7.5% (NIC) and 20 year term will fund approximately $20 million.

TABLE P.2
Preliminary Estimate of Facilities Cost
Potentially Funded from Debt Service[30]

Facility	Segment	Estimated Costs[31]
2 or 3	La Media Road from Birch Road to Street C	$5,000,000
Total Costs		**$5,000,000**

II.5.4.15.8 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

The following material presents information on the general aspects of life cycle cost analysis as well as its specific application to the City of Chula Vista operations. The discussion regarding the general benefits and process of LCC is meant to provide a common base of understanding upon which further analysis can take place.

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

[30] Estimate is subject to change based on detailed construction cost estimates

[31] Cost estimates were based on the City of Chula Vistas "Eastern Area Development Impact Fees for Streets, dated July 2002 by Wildan.

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 that may influence the economic feasibility of applying LCC analysis are:

1. Energy Intensiveness — LCC should be considered when the anticipated energy costs of the purchase are expected to be large throughout its life.
2. 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.
3. 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.
4. 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.

In addition to these existing processes, the City should require the use of LCC analysis prior to or concurrent with the design of public facilities required by new development. Such a requirement will assist in the determination of the most cost effective selection of public facilities.

APPENDIX

A. Fiscal Impact Analysis Tables



APPENDIX A

Table A-1
ABSORPTION SCHEDULE BY LAND USE

Land Use	Per Unit/ Net Acre Value (000's)	Cumulative Developed and Occupied Units/Net Acres 2004	2005	2006	2007	2008	2009	2010	TOTAL
Multi-Family Residential	$400 per du	100	200	300	400	500	600	756	756
Single Family Residential	$300 per du	200	300	400	448	448	448	448	448
Residential Population (@ 3.01/du)		903	1505	2107	2552	2853	3154	3624	3624
Parks		0	0	7.6	7.6	7.6	7.6	7.6	7.6
Public Use		0	1.1	1.1	1.8	1.8	2.8	2.8	2.8

Table A-2
ASSESSED VALUE

Land Use	Per Unit/ Net Acre Value (000's)	Cumulative Assessed Value(000's) 2004	2005	2006	2007	2008	2009	2010	TOTAL
SINGLE FAMILY RESIDENTIAL UNITS	$400	$ 40,000	$ 80,000	$ 120,000	$ 160,000	$ 200,000	$ 240,000	$ 302,400	$ 302,400
MULTI FAMILY RESIDENTIAL UNITS	$300	$ 30,000	$ 60,000	$ 90,000	$ 120,000	$ 134,400	$ 134,400	$ 134,400	$ 134,400

Table A-3
Secured Property Tax Revenue (000s)

SECURED PROPERTY TAX REVENUES		2004	2005	2006	2007	2008	2009	2010
TOTAL OTAY RANCH VILLAGE 7								
Total Assessed Values		$ 70,000	$ 140,000	$ 210,000	$ 280,000	$ 334,400	$ 374,400	$ 436,800
Tax Rate	1.0%	$700	$1,400	$2,100	$2,800	$3,344	$3,744	$4,368
TOTAL CHULA VISTA SHARE*	10.6%	**$74.2**	**$148.4**	**$222.6**	**$296.8**	**$354.5**	**$396.9**	**$463.0**

Table A-4

UNSECURED PROPERTY TAX	Tax Per Acre	Unsecured Property Tax Revenue (000's) 2004	2005	2006	2007	2008	2009	2010
Industrial Uses	$312	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Commercial Uses	$301	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	$0.0

* Derived from discussions with the County Assessors Office and the City of Chula Vista (According to the Master Tax Agreement between the City of Chula Vista and the County, 41% of the County's general, library and flood control funds would go to the city.)

Table A-5
ESTIMATED PROPERTY TRANSFER TAX REVENUES

Single Family Resale Ratio	0.00007857
Commercial Resale Ratio	0.00003929

Product	Resale Rate (Years)	Property Transfer Tax (000s) 2004	2005	2006	2007	2008	2009	2010
Single Family Units	7	$3.1	$6.3	$9.4	$12.6	$15.7	$18.9	$23.8
Multi Family Units	7	$2.4	$4.7	$7.1	$9.4	$10.6	$10.6	$10.6
Commercial/Industrial Acres	14	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$5.5**	**$11.0**	**$16.5**	**$22.0**	**$26.3**	**$29.4**	**$34.3**

Table A-6
ESTIMATED SALES TAX REVENUES

2003 Budget For Sales Tax	$20,353,998

Land Use	Sales Tax Per Unit/Acre (000s)	City of Chula Vista's Share of Sales Tax (000s) 2004	2005	2006	2007	2008	2009	2010
Total Single Family Units	$0.234	$23.4	$46.8	$70.2	$93.6	$117.0	$140.4	$176.9
Total Multi Family Units	$0.234	$23.4	$46.8	$70.2	$93.6	$104.8	$104.8	$104.8
Total Industrial Acres	$3.354	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Commercial Acres	$3.570	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$46.8**	**$93.6**	**$140.4**	**$187.2**	**$221.8**	**$245.2**	**$281.7**

Table A-7
ESTIMATED FRANCHISE FEES

2003 Budget
For Franchise Fees $6,935,040

Land Use	Per Unit	Franchise Fee Revenue (000's)						
		2004	2005	2006	2007	2008	2009	2010
Total Single Family Units	$41	$4.1	$8.2	$12.3	$16.4	$20.5	$24.6	$31.0
Total Multi Family Units	$41	$4.1	$8.2	$12.3	$16.4	$18.4	$18.4	$18.4
Total Industrial Acres	$2,523	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Commercial Acres	$1,802	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$8.2**	**$16.4**	**$24.6**	**$32.8**	**$38.9**	**$43.0**	**$49.4**

Table A-8
ESTIMATED TRANSIENT OCCUPANCY TAX

2003 Budget
For Transient Occupancy Tax $2,173,500

Land Use	TOT per Unit/Net Acre	Transient Occupancy Tax (000's)						
		2004	2005	2006	2007	2008	2009	2010
Total Single Family Units	$3	$0.3	$0.6	$0.9	$1.2	$1.5	$1.8	$2.3
Total Multi Family Units	$3	$0.3	$0.6	$0.9	$1.2	$1.3	$1.3	$1.3
Total Industrial Acres	$134	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Commercial Acres	$70	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$0.6**	**$1.2**	**$1.8**	**$2.4**	**$2.8**	**$3.1**	**$3.6**

Table A-9
ESTIMATED UTILITY TAX

2003 Budget
For Utility Tax $4,170,600

Land Use	Tax per Unit/Net Acre	Utility Tax Revenue (000's)						
		2004	2005	2006	2007	2008	2009	2010
Total Single Family Units	$25	$2.5	$5.0	$7.5	$10.0	$12.5	$15.0	$18.9
Total Multi Family Units	$25	$2.5	$5.0	$7.5	$10.0	$11.2	$11.2	$11.2
Total Industrial Acres	$1,518	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Commercial Acres	$1,084	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$5.0**	**$10.0**	**$15.0**	**$20.0**	**$23.7**	**$26.2**	**$30.1**

Table A-10
ESTIMATED BUSINESS LICENSE REVENUE

2003 Budget For Business License Tax	$1,057,417

Land Use	Average Business License Fee Per Acre	Business License Fees (000's) 2004	2005	2006	2007	2008	2009	2010
Total Industrial Acres	$319	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total All Commercial Acres	$587	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**	**$0.0**

Table A-11
ESTIMATED MISCELLANEOUS REVENUES

2003 Budget	Total Budget	Allocation of Budget: Residential	Commercial	Industrial	Per House Unit	Per Comm. Acre	Per Industrial Acre
Animal License	$96,614	$96,614			$1.55		
Bicycle License	$0	$0			$0.00		
Motor Vehicle Licenses	$0	$0			$0.00		
State HOPTR	$0	$0			$0.00		
Gas Tax	$2,559,533	$2,239,591	$243,156	$76,786	$35.83	$173.1	$105.4
Library Fines	$170,000	$170,000			$2.72		
Parking Citations	$312,995	$234,746	$59,469	$18,780	$3.76	$42.3	$25.8
Charges for Current Services							
Swimming Pools	$0	$0			$0.00		
Recreation Program	$668,907	$668,907			$10.70		
Park Reservation Fees	$0	$0			$0.00		
Other Park & Recr. Fees	$0	$0			$0.00		
Total Misc. Revenue	$3,808,049	$3,409,859	$302,625	$95,566			
	Per Unit/Acre				$54.56	$215.48	$131.22

Land Use	Per Unit/Acre	Miscellaneous Revenue (000's) 2004	2005	2006	2007	2008	2009	2010
Total Single Family Units	$54.56	$5.5	$10.9	$16.4	$21.8	$27.3	$32.7	$41.2
Total Multi Family Units	$54.56	$5.5	$10.9	$16.4	$21.8	$24.4	$24.4	$24.4
Total Industrial Acres	$131.22	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Total Commercial Acres	$215.48	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
TOTAL OTAY RANCH VILLAGE 7		**$10.9**	**$21.8**	**$32.7**	**$43.6**	**$51.7**	**$57.2**	**$65.7**

Table A-12
ESTIMATED LEGISLATIVE AND ADMINISTRATIVE EXPENDITURES

			Estimated Cost (000's)						
Legislative & Administrative			2004	2005	2006	2007	2008	2009	2010
Multi-Family Residential	$3.96	per du	$ 0.4	$ 0.8	$ 1.2	$ 1.6	$ 2.0	$ 2.4	$ 3.0
Single Family Residential	$3.96	per du	$ 0.8	$ 1.2	$ 1.6	$ 1.8	$ 1.8	$ 1.8	$ 1.8
Population	$1.14	per person	$ 1.0	$ 1.7	$ 2.4	$ 2.9	$ 3.3	$ 3.6	$ 4.1
Total Legislative & Administrative			$ 2.2	$ 3.7	$ 5.2	$ 6.3	$ 7.1	$ 7.8	$ 8.9

Table A-13
ESTIMATED MANAGEMENT AND INFORMATION SERVICES EXPENDITURES

			Estimated Cost (000's)						
Management and Information services			2004	2005	2006	2007	2008	2009	2010
Population	$3.06	per person	$ 2.8	$ 4.6	$ 6.4	$ 7.8	$ 8.7	$ 9.7	$ 11.1
Total Management and Information services			$ 2.8	$ 4.6	$ 6.4	$ 7.8	$ 8.7	$ 9.7	$ 11.1

Table A-14
ESTIMATED DEVELOPMENT AND MAINTENANCE SERVICES EXPENDITURES

		Estimated Cost (000's)						
Development and Maintenance Services		2004	2005	2006	2007	2008	2009	2010
Multi-Family Residential	$55.09	$ 5.5	$ 11.0	$ 16.5	$ 22.0	$ 27.5	$ 33.1	$ 41.6
Single Family Residential	$55.09	$ 11.0	$ 16.5	$ 22.0	$ 24.7	$ 24.7	$ 24.7	$ 24.7
Population	$1.94	$ 1.8	$ 2.9	$ 4.1	$ 5.0	$ 5.5	$ 6.1	$ 7.0
Parks	$60.73	$ -	$ -	$ 0.5	$ 0.5	$ 0.5	$ 0.5	$ 0.5
Public Use	$91.10	$ -	$ 0.1	$ 0.1	$ 0.2	$ 0.2	$ 0.3	$ 0.3
Public Works Operations-For Southeast Zone								
Multi-Family Residential	$147.83	$ 14.8	$ 29.6	$ 44.3	$ 59.1	$ 73.9	$ 88.7	$ 111.8
Single Family Residential	$147.83	$ 29.6	$ 44.3	$ 59.1	$ 66.2	$ 66.2	$ 66.2	$ 66.2
Total Development and Maintenance Services		$ 62.7	$ 104.4	$ 146.6	$ 177.7	$ 198.5	$ 219.6	$ 252.1

Table A-15
ESTIMATED POLICE SERVICES EXPENDITURES

		Estimated Cost (000's)						
Police		2004	2005	2006	2007	2008	2009	2010
Multi-Family Residential	$263.33	$ 26.3	$ 52.7	$ 79.0	$ 105.3	$ 131.7	$ 158.0	$ 199.1
Single Family Residential	$263.33	$ 52.7	$ 79.0	$ 105.3	$ 118.0	$ 118.0	$ 118.0	$ 118.0
Population	$5.39	$ 4.9	$ 8.1	$ 11.4	$ 13.8	$ 15.4	$ 17.0	$ 19.5
Parks	$822.48	$ -	$ -	$ 6.3	$ 6.3	$ 6.3	$ 6.3	$ 6.3
Public Use	$822.48	$ -	$ 0.9	$ 0.9	$ 1.5	$ 1.5	$ 2.3	$ 2.3
Total Police		$ 83.9	$ 140.7	$ 202.9	$ 244.9	$ 272.9	$ 301.6	$ 345.2

Table A-16
ESTIMATED FIRE SERVICES EXPENDITURES

Fire		Estimated Cost (000's) 2004	2005	2006	2007	2008	2009	2010
Multi-Family Residential	$99.31	$ 9.9	$ 19.9	$ 29.8	$ 39.7	$ 49.7	$ 59.6	$ 75.1
Single Family Residential	$99.31	$ 19.9	$ 29.8	$ 39.7	$ 44.5	$ 44.5	$ 44.5	$ 44.5
Parks	$119.02	$ -	$ -	$ 0.9	$ 0.9	$ 0.9	$ 0.9	$ 0.9
Public Use	$119.02	$ -	$ 0.1	$ 0.1	$ 0.2	$ 0.2	$ 0.3	$ 0.3
Total Fire		$ 29.8	$ 49.8	$ 70.5	$ 85.3	$ 95.3	$ 105.3	$ 120.8

Table A-17
ESTIMATED CULTURAL AND LEISURE EXPENDITURES

Cultural and Leisure		Estimated Cost (000's) 2004	2005	2006	2007	2008	2009	2010
Multi-Family Residential	$3.82	$ 0.4	$ 0.8	$ 1.1	$ 1.5	$ 1.9	$ 2.3	$ 2.9
Single Family Residential	$3.82	$ 0.8	$ 1.1	$ 1.5	$ 1.7	$ 1.7	$ 1.7	$ 1.7
Population	$80.21	$ 72.4	$ 120.7	$ 169.0	$ 204.7	$ 228.8	$ 253.0	$ 290.7
Total Cultural and Leisure		$ 73.6	$ 122.6	$ 171.6	$ 207.9	$ 232.4	$ 257.0	$ 295.3

Table A-18
ESTIMATED OTHER NON-DEPARTMENTAL EXPENDITURES

Non-Departmental		Estimated Cost (000's) 2004	2005	2006	2007	2008	2009	2010
Population	$1.33	$ 1.2	$ 2.0	$ 2.8	$ 3.4	$ 3.8	$ 4.2	$ 4.8
Total Non-Departmental		$ 1.2	$ 2.0	$ 2.8	$ 3.4	$ 3.8	$ 4.2	$ 4.8

UNNAMED CANYON

PROPOSED L1

PROPOSED BIRCH PARKWAY

PROPOSED L2

FOR NOTHERLY PORTION OF VILLAGE 7 SEE DRAINAGE POINT BASIN (B1, B2, AND B3) PER RICK MASTER DRAINAGE STUDY FOR PODOCARPUS CREEK, DATED: OCT. 31, 1999

Q_{100}=156 cfs
Area=141.9 ac

Q_{100}=254 cfs
Area=240.4 ac

Q_{100}=346 cfs
Area=343.2 ac

Q_{100}=382 cfs
Area=384.0 ac

WOLF CANYON

McMILLIN BOUNDARY

OTAY VALLEY

UNNAMED CANYON

UNNAMED CANYON

Q_{100}=164 cfs
Area=141.4 ac

6.1

PROPOSED ROCK MOUNTAIN ROAD

UNNAMED CANYON

Q_{100}=229 cfs
Area=206.7 ac

6.2

P&D

400' 0' 400' 800' 1200'
GRAPHIC SCALE: 1"=400'

LEGEND

NATURAL BASIN BNDRY	
FLOW PATH	
Cubic Feet per Second	cfs
Area in Acres	ac
NODE NUMBER	(8.1)
100 YEAR EVENT	Q_{100}

P&D Consultants created this drainage map. However, the 100-year, 6-hour flow rates were determined by Rick Engineering Company.

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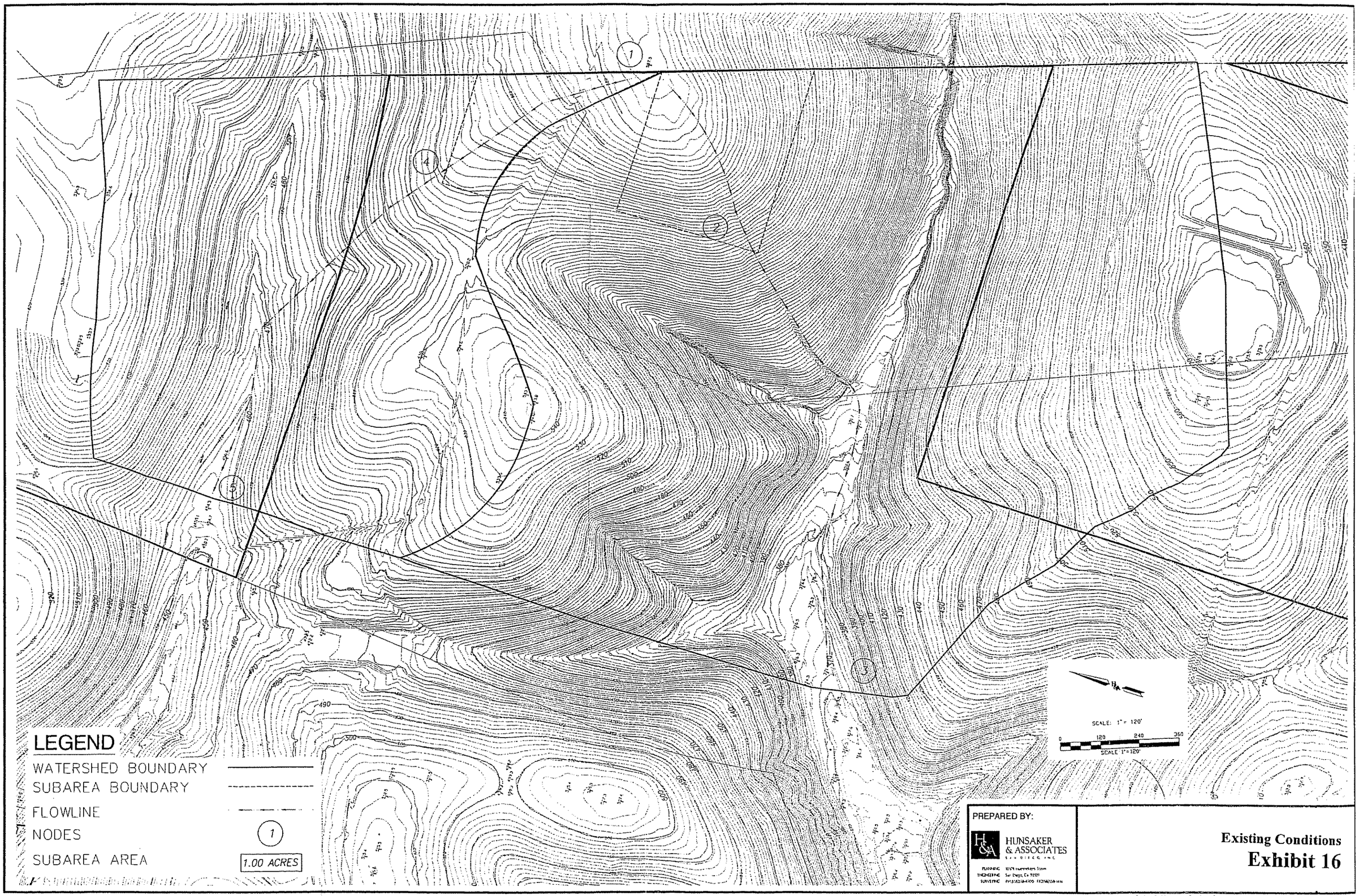
PRELIMINARY EXISTING DRAINAGE BASIN BOUNDARIES

OTAY RANCH VILLAGE 7
McMILLIN - LOMAS VERDES
CHULA VISTA, CA

Preliminary Existing Basin Boundaries

Exhibit 15

DWGNAME: P:/ENGR/75221/ACAD/HYDRO/221HYDR-X.DWG



LEGEND

WATERSHED BOUNDARY

SUBAREA BOUNDARY

FLOWLINE

NODES (1)

SUBAREA AREA [1.00 ACRES]

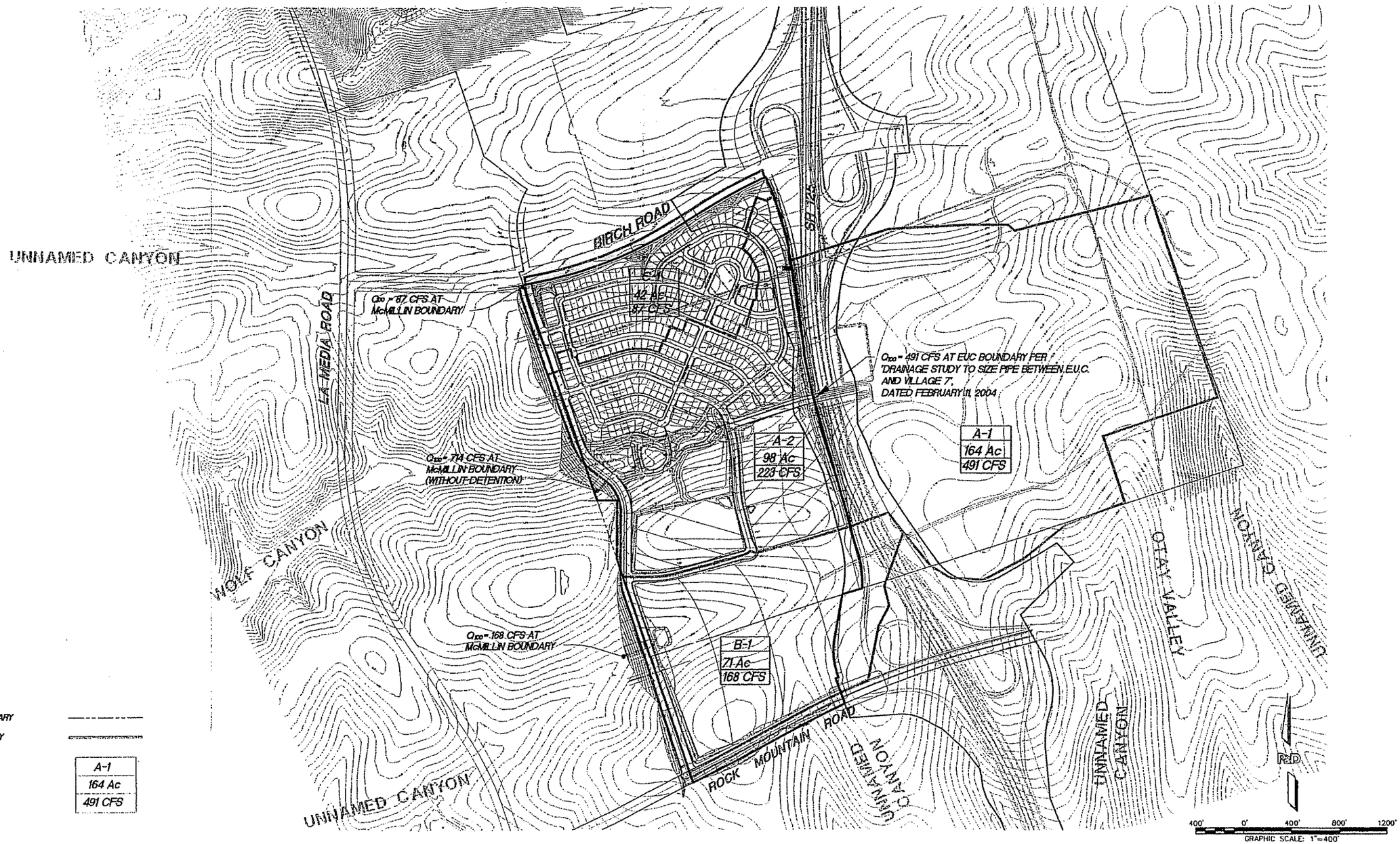
PREPARED BY:

HUNSAKER & ASSOCIATES

Existing Conditions

Exhibit 16

H&A 05/21/2004



LEGEND

McMILLIN OWNERSHIP BOUNDARY	————
DEVELOPED BASIN BOUNDARY	————
BASIN DESIGNATION	A-1
BASIN AREA (ACRES)	164 Ac
BASIN RUNOFF (CFS)	491 CFS

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DEVELOPED DRAINAGE BASIN BOUNDARIES
OTAY RANCH VILLAGE 7
VILLAGE OF VISTA VERDE
CHULA VISTA, CA

Developed Drainage Basin Boundaries (McMillin Ownership)

Exhibit 17

P:\ENGR\75221\ACAD\HYDRO\221HYDR-PROP.DWG

LEGEND

WATERSHED BOUNDARY
SUBAREA BOUNDARY
FLOWLINE
NODES

C-1 COMMERCIAL
CPF-5
R-14
R-16
R-17
TOWNHOMES
R-15
R-18
R-19
R-20
FLOW FROM LA MEDIA/VILLAGE 2
OS-1
R-24
R-28
R-27A
OTAY RANCH VILLAGE 7
DETENTION BASIN
MCMILLIN PROPERTY BOUNDARY
PROPOSED WOLF CANYON CHANNEL
OS-2
P-1 PARK
OTAY VILLAGE 4 BALANCE SITE
VILLAGE 4 PARK SITE

0 200 400 600
SCALE 1"= 200'

MSA 05/24/2004

PREPARED BY:
HUNSAKER & ASSOCIATES

Developed Conditions Hydrology
(Otay Project, L. P.)
Exhibit 18